

INSIDE DOPE

by GEORGE F. TAUBENECK

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Get Acquainted with
Your Audience

Story of the Week

Leo Handell, who directs Metro-Goldwyn-Mayer's research department, decided to test public reaction to flowery adjectives like "amazing," "stunning," "sensational," and "death-taking," which are standard equipment on movie advertisements. "Tell me, please," he asked 116 random ticket-buyers, "do you like or dislike extravagant adjectives in motion picture advertisements?"

Thirty-nine per cent of Leo's interviewees stared at him blankly.

"Adjectives? What are adjectives, er, what you said?"

Quotes of the Week

"It is an old story that wisdom in conduct is not learnt from books or technical study, but from experience and character. We know what we mean when we talk of men or women of 'sound judgment' or of 'common sense.' We distinguish them from the expert who we rather distrust. We should defend this attitude by saying that the expert is a specialist: that what is wanted for conduct is all-round experience of people and things. 'Sound judgment' or 'common sense' are not the products of ignorance. They are produced by experience of a certain kind, by responsibility, by a varied acquaintance with men and things and by an all-round experience. The expert or specialist on the other hand has probably paid for his expert knowledge by having to undergo a long training which has removed him from the ordinary rough-and-tumble of life. He has probably not had to check his judgments by practical experience. He has probably not had to check his mistakes. He has become 'academic' in the bad sense of that term."—A. D. LINDSAY, *The Modern Democratic State*, (Oxford University Press, 1943).

"Everyone knows how easily human personality becomes a unit in a statistical table for the bureaucrat."—HAROLD J. LASKI, *Fabian Tract No. 235* (1931 Harold J. Laski and The Fabian Society).

"You will smile here at the consistency of those democratists, who, when they are not on their guard, treat the humbler part of the community with the greatest contempt, whilst, at the same time, they pretend to make them the depositories of all power."—EDMUND BURKE, *Reflections on the Revolution in France*.

Gag of the Week

Students of colloquialisms note that in some sections of the country a kitchen sink is called a "zinc." And, as friend Harry Wade observes, if that "zinc" has a "water fasset," why, that's where "Dope" comes from.

Uncomfortable Thoughts

Businessmen who rely overly on professional research and surveys, we like to argue, have been color-blind as to some profound changes in public attitudes. It isn't the fault of businessmen that they don't understand these changes. The "scientific" posters have misled 'em with graphs and charts which are black and white and grey—instead of flesh and blood.

People aren't statistics. They're colorful, emotional individuals. No two have matching fingerprints, no two or two million are exactly alike in any other respect. Why "weighted averages" can be wrong. And all the other "scientific flapdoodle of academic research."

A critical attitude toward statistics on humans is bolstered by the lamented Truman-Dewey presidential contest. The mighty nation-

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Gov't Asks Data 'By Model' for Freezer, Part Tax

WASHINGTON, D. C.—On the question of "when is a low temperature cabinet not a home freezer," the answer to which determines whether or not the product is taxable, the Bureau of Internal Revenue, for the time being, will make the decision on the basis of a consideration of individual cases.

This means that the manufacturer or assembler of home freezers who believes that a low temperature cabinet which he sells is not suitable for use as a home freezer and hence not subject to tax, should present descriptive literature and specifications on such a product to the Bureau of Internal Revenue along with his arguments that it is not taxable.

That was the latest information gained in a direct contact with W. T. Ekstrand of the bureau's headquarters office in Washington. Ekstrand is one of the men in the bureau most concerned with the in-

(Concluded on Page 4, Column 2)

Universal Cooler To Continue Operation As Tecumseh Div.

MARION, Ohio—Tecumseh Products Co. is planning no changes in the present operations of the Universal Cooler division here, which it purchased last week from Newport Steel Corp. Universal Cooler will be operated as a division of Tecumseh Products Co.

This was made clear at a dinner meeting Nov. 6 in Marion when Tecumseh officials, headed by President Ray Herrick, met with Universal Cooler executives.

Harold Wolf, who has made an outstanding record as Tecumseh's factory manager, will lend his talents to the Marion operation for a while. Other than that, however, the Universal Cooler division will "operate with the same personnel, make the same products at the same prices, and deal with the same classes of customers," that it did before the purchase by Tecumseh.

RACCA Completes Convention Program; Long Beach Conclaves Open Nov. 16, 17

CHICAGO—Emphasis at the 5th annual convention of the Refrigeration and Air Conditioning Contractors Association will be on the government's defense program, particularly as it applies to contractors. The program announced by RACCA shows that the entire second day of the two-day meeting will be devoted to "Mobilization Problems—A Day with the Government." (Details of the program had not been announced previously pending final arrangements.)

The convention has been set for Long Beach, Calif., Nov. 16-17. It will be held at the Lafayette hotel there in conjunction with the 1950 West Coast Refrigeration and Air Conditioning Educational Exhibit and Conference.

Subjects to be discussed during the sessions on mobilization include inventories, priorities, and allocations; price and wage controls; credit controls and regulations; mobilizing for

(Concluded on Back Page, Column 1)

Supply, Tax Problems Spotlited At Joint Rema-Rewa Meeting

WHITE SULPHUR SPRINGS, W. Va.—Refrigeration Equipment Wholesalers Association in their annual meeting here elected J. P. "Jack" Glass, Chase Supply Co., president for the coming year, discussed moves designed to reduce operating expenses and make their business more efficient, and fretted over shortages of certain key items for the refrigeration and air conditioning field.

One of the ways in which refrigeration supplies wholesalers can reduce operating expenses is to make sure that they get the proper freight classifications on items on which they pay shipping charges. A formal dis-

(Concluded on Back Page, Column 2)

Bucholzer Heads Airtemp; Newberg Goes To Dodge

DAYTON—C. E. Bucholzer has been named president of Airtemp Division of Chrysler Corp., producer of Airtemp air conditioning and refrigeration equipment, succeeding W. C. Newberg, who has been named a vice president and director of the Dodge Division of Chrysler.

Bucholzer joined Airtemp at Dayton in 1936 as a job setter. In 1944 he became general superintendent of all Airtemp plants. Earlier this year he had been named vice president and a director.

Newberg, who was one of the youngest top executives in the indus-

(Concluded on Page 4, Column 5)

How To Meet Deposit Requirements, Still Offer 30-Day Trial

WASHINGTON, D. C.—How an appliance dealer can offer his customers a 30-day "free" home trial and still comply with terms of Regulation W was explained by Federal Reserve Board officials recently.

The instalment credit regulation states that the retailer must either get the required down payment within 10 days after delivery of a listed

(Concluded on Page 4, Column 1)

WHITE SULPHUR SPRINGS, W. Va.—Members of Refrigeration Equipment Manufacturers Association in their joint meeting here with members of the Refrigeration Equipment Wholesalers Association discussed problems of supply, manpower, and taxes, with about the only general conclusion to be reached is that it is going to be more difficult to do business in the coming 12 months.

Some progress was reported in efforts by Rema to get a fair interpretation of the excise tax on home freezers, and components suitable for use in the production of home freezers (see story elsewhere on this

(Concluded on Page 29, Column 1)

Cherry Gets Key Philco Sales Post

PHILADELPHIA—Jack Cherry, who has been with Philco Corp. for 16 years and has been general manager of the accessory division for the past year, has been appointed to the new post of sales manager of air conditioning and freezers, it was announced by John M. Otter, vice president and general sales manager.

Cherry started in the factory organization of Philco shortly after graduation from Northeast high

(Concluded on Page 4, Column 1)

New Trend Seen as 4 Gas Range Mfrs. Raise Prices

NEW YORK CITY—Prices on a number of gas range models in the lines of four different manufacturers have been raised from 3 to 5% recently with the prospect of further increases when new lines are introduced in January, it was reported here.

Higher material costs that are expected to rise even more when the government starts to cut back steel allocations for civilian uses were said to have caused the price rises.

(Concluded on Page 4, Column 3)

Unusual Air Conditioning Jobs

They May Help Installing Firm Win Valuable Prize In \$1,000 Contest Sponsored by NEWS

DETROIT—A contest to find the most unusual air conditioning installation is currently being launched by AIR CONDITIONING & REFRIGERATION NEWS.

(For complete details on the contest, see page 14.)

A total of \$1,000 in prizes—75 prizes in all—will be awarded to winning entries in three contest divisions. The three divisions are room cooler installations, package unit installations, and central station installations.

All bona fide air conditioning dealers or contractors and their employees are eligible to enter the contest. Only requirement is that the person entering the contest has participated in some way in the installation described.

Contestants are asked simply to

Cut In Aluminum For Civilian Use Is 'In the Works'

Reduction Would Knock Off 40% at Current Production Rates; To Hit Appliances

WASHINGTON, D. C.—Unofficial reports indicate that the National Production Authority intends to cut aluminum production for civilian use to 75% of production during the year ending June 30, 1950.

The 25% cutback, however, is expected to amount to a drop of nearly 40% from current production levels.

Another report that the cutback would amount to 35% brought a protest from Frank R. Nichols, president of Nichols Wire & Aluminum Co. Nichols urged the NPA to consider this action carefully as it would seriously affect the operation of aluminum producers.

He said that he could not understand why such restrictions were necessary when the industry still had unused capacity and the government has not purchased aluminum offered for stockpile by Canada. He claimed that no defense project has been held up for lack of aluminum.

Appliance manufacturers had previously indicated that they would cut back their production as soon as the NPA issued its order on aluminum, copper, nickel, and other non-ferrous metals.

Govt. Seen Using More Steel Output In '51

PITTSBURGH—Steel industry sources here are rapidly discovering that earlier estimates of government needs for steel for defense work are falling far short of actualities.

Industry estimates now are that the government will take about 20 to 25% of total production in 1951 for defense orders instead of 4%. Orders for flat rolled steel may take up to 50% of sheet and plate steel output.

Defense programs already set up—for arms and ammunition, the railroad car program, the gas and oil program, and a vast number of small jobs—will take a big bite out of next year's production.

New Deepfreeze Prices Include Excise Tax

CHICAGO—Prices of Deepfreeze home freezers have been raised approximately 10% to cover the recently imposed manufacturer's excise tax, the Deepfreeze division, Motor Products Corp., here, announced recently.

Price changes were as follows:

Model	Old Price	New Price
B-7	\$239.95	\$269.95
C-7	269.95	299.95
B-12	369.95	409.95
C-12	399.95	459.95
C-16	499.95	559.95



INSPECTING an air conditioning unit at close range are three guests.



VIEWS air conditioning and electric space heating units in Union Electric auditorium, St. Louis, are other visitors.



DEMONSTRATING the new Hotpoint "Super-Range" is Bob Jackson of Hotpoint. More than 400 architects, builders, and commercial cooking experts watched.

Over 400 Inspect Newest Cooling, Heating Products At Union Electric Exhibit

ST. LOUIS—More than 400 architects, builders, and commercial cooking experts were guests of Union Electric Co., utility here, at a recent exhibit of newest developments in air conditioning, radiant heating, the heat pump, and commercial electric cooking.

The one-day show, held recently in the company's 10th floor auditorium, featured 20 displays of late-model air conditioning with emphasis on residential application, electric space

heating, and commercial cooking units sponsored by leading manufacturers in those fields. A highlight of the day's program was a conference on new air conditioning and radiant heating units now available for residential builders. This session attracted more than 100 architects from the greater St. Louis area.

ROOM UNITS POPULAR

Elmer W. Cortes, Union Electric air conditioning expert, told the architects that there has been a tremendous increase in public acceptance of home air conditioning units. He pointed out that, in 1930, there were 23 installations made in the area served by Union Electric—one of these was a residential unit. "So far in 1950, said Cortes, "there have been approximately 1900 installations—1,100 in residences."

He urged them to plan wisely for their client's future needs by blueprinting adequate ductwork and wiring . . . although air conditioning is not specified, it can then easily be added later.

Residential Sales Manager Phil V. Brown described the mounting interest in electric heating for primary home heating. In the past, he said, it had been used mainly to supplement other heating systems. He pointed out that electrical heating has many advantages . . . cleanliness, more uniform heat, less draft, easy operation, and space-saving.

The revolutionary heat pump combines the functions of air conditioning and heating. Engineer George Whitlow stated that a "pilot" installation was made in St. Louis County in 1947 and that two additional installations are being made for the coming winter. Union Electric Co. has also established a heat pump laboratory for further development work.

"All of Union Electric's information on the heat pump is and will be continuously available to you," he said.

S. S. Sansbury of the company's Commercial Cooking division reminded the group that efficient planning of a large kitchen is a broad problem calling for close cooperation between the architect, consulting engineer, and the owner or manager.

'SUPER-RANGE' DEMONSTRATED

Following the dinner meeting for architects, the St. Louis Stewards' and Caterers' Association, whose membership includes many of the city's hotel, club, institution, and restaurant officials met in the auditorium and saw a demonstration of the Hotpoint Super-Range. Conducting the demonstration were Robert Jackson, narrator, and Al Mesko, chef, who pointed out the various features of the new commercial cooking equipment which does the work of two ordinary ranges. By preparing a variety of food on the surface units of the range, they demonstrated its versatility and speed.

Earlier in the day, builders of the area were guests for an "open house," highlighted by the exhibits. Fourth major portion of the day's activities was a short training session for Union Electric's residential sales department personnel.

Case of Employer-Member Of Bargaining Group Not Under NLRB Jurisdiction

WASHINGTON, D. C.—Member ship in an employer group for collective bargaining purposes will not bring an individual company, when acting alone, under the jurisdiction of the National Labor Relations Act if the company's volume of interstate business is less than the minimum volume set up by the NLRB, the board ruled recently.

In a case involving MacFarlane Candies of Stockton, Calif., the NLRB upheld its trial examiner's dismissal of a complaint against the company brought by the Retail Clerks Union, Loc. 197 of the Retail Clerks International Association AFL.

The complaint alleged that the company was engaging in unfair labor practices affecting interstate commerce.

In dismissing the complaint, the board stated:

"Inasmuch as neither the employer's annual out-of-state purchases nor its annual out-of-state sales, either direct or indirect, nor any combination thereof, meet the minimum standards recently enunciated by the board, we find that it would not effectuate the policies of the act to assert jurisdiction herein."

"Nor is a different conclusion warranted by the fact that the employer has engaged in multiemployer bargaining on a distinct area basis where, as here, even assuming that it is engaged in commerce, is not a party to the proceeding, and has not bargained on a multiemployer basis for the store at which the unfair labor practices are alleged to have occurred."

Dept. Store Sales Rise 5% For Week Ending Oct. 28

WASHINGTON, D. C.—Department store sales for the week ending Oct. 28 rose 5% above those of the corresponding week of 1949, the Federal Reserve Board announced.

Sales for the four weeks ending Oct. 28 were up 7% and for the year to that date 5%.

Gains were reported in eight of the 12 Federal Reserve districts. Cleveland district sales jumped 11%, Chicago and Boston 10%, Philadelphia and San Francisco 9%, New York 4%, Richmond and Kansas City 2%.

Four districts reported sales declines. Volume was down 1% in Minneapolis, 3% in Atlanta, 4% in St. Louis, and 7% in Dallas.

Admiral Output To Jump

CHICAGO—Admiral Corp. has announced that its new refrigerator plant in Galesburg, Ill., will begin production on Nov. 15.

At the same time, John B. Huarisa, executive vice president declared that Admiral expects to produce 300,000 refrigerators this year as compared to 65,000 units last year.

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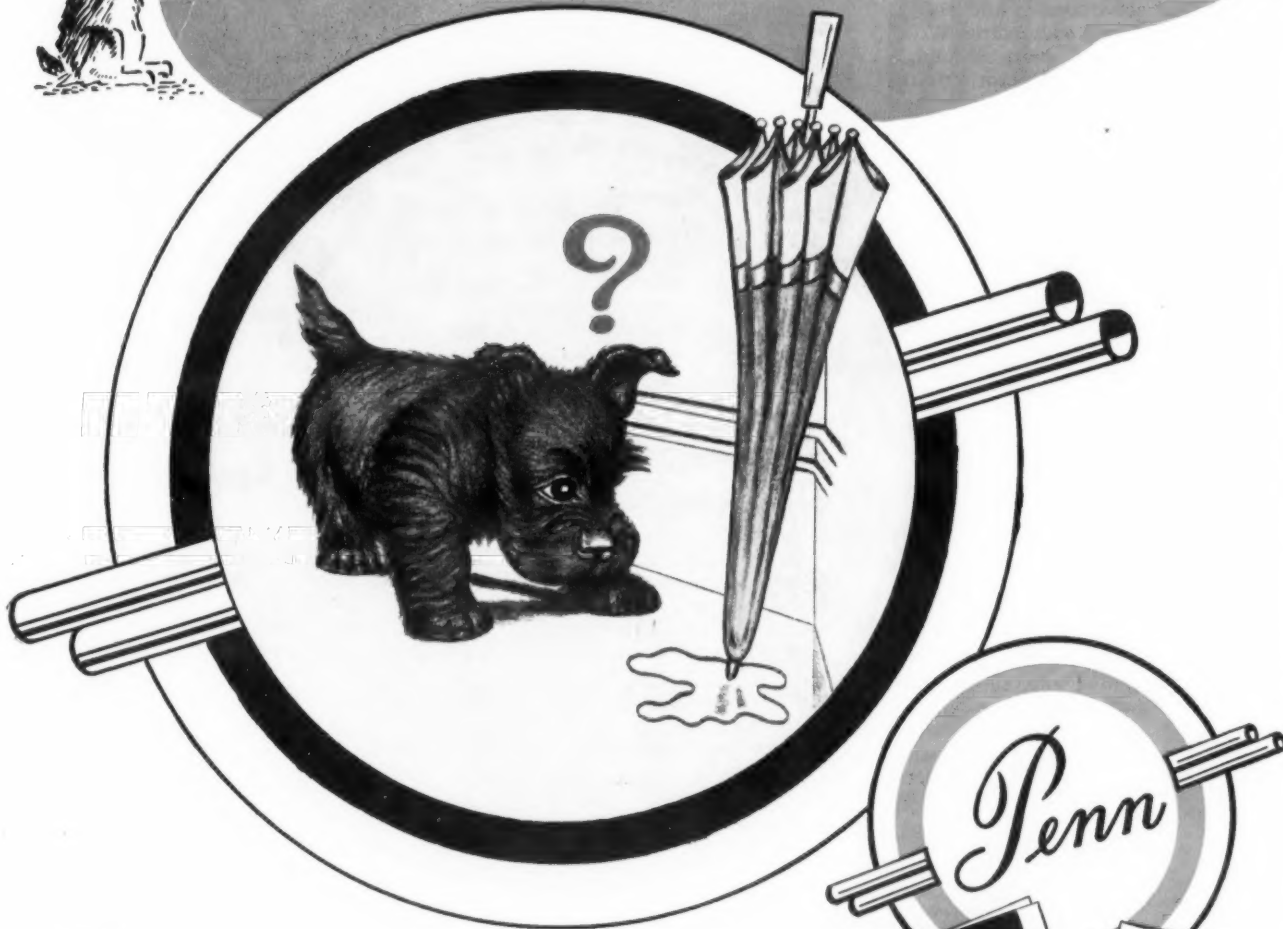
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'DO' Rating Use Expanded by NPA

WASHINGTON, D. C.—The National Production Authority has amended its original priorities regulation so that any government agency can use the "DO" priority ratings—subject to NPA approval. Formerly, DO priorities could be applied only to the Department of Defense and the Atomic Energy Commission. Under the new amendment, the secretary of Defense can assign the priority-issuing power to other agencies so they can obtain materials for projects "intimately connected with the national defense." The secretary is also permitted to apply the rating himself to procurement orders of these other agencies. However, the NPA must approve the purpose for which the DO rating is to be used before the other agencies can get the benefit of the rating. According to the NPA, the amendment is not intended to open the way for priorities on non-military production.

NPA Building Ban Rule Won't Halt Construction

WASHINGTON, D. C.—If the National Production Authority finds it necessary to limit commencement of additional types of construction not now covered by Order M-4, the agency does not intend to halt construction which may then be under way, according to Administrator W. H. Harrison.

He said Order M-4, which bans construction of new buildings for amusement, recreational, or entertainment purposes, has been revised accordingly.

The section of the original order stating the policy of the NPA has caused concern in the construction industry. This section had indicated that anyone starting construction which is not on the prohibited list, but which does not further the defense effort, would run the risk of being unable to complete the building.

As revised, the section now reads: "In the event that increasing material shortages clearly indicate the necessity for such action in the national interest, NPA may further limit the commencement of construction of additional types of projects which do not support the defense effort or increase the nation's productive capacity."

Natural Gas for Heating Homes Limited In Illinois

ST. LOUIS—No new applications for gas for home heating in 37 southwestern Illinois communities can be accepted by the Illinois Power Co. and its parent firm, the Union Electric Co. of Missouri, the Illinois Commerce Commission ruled recently.

The ban took effect on Oct. 27 and was prompted by a Federal Power Commission regulation allocating the amount of gas the Mississippi River Fuel Corp. can supply to these utilities.

Industrial firms in these communities, which include Alton, Granite City, St. Louis, Monsanto, and Belleville, were ordered not to make any appreciable increase in their use of natural gas.

Packaged Beer May Constitute 80% Of Brewers' Market In Next 10 Years

NEW YORK CITY—An analysis of packaged and draught beer consumption figures indicates that within the next decade, packaged beer may aggregate 80% of the beer market as compared with slightly less than 70% last year and 20-odd per cent in the year following repeal.

This is one of the findings contained in the 9th annual edition of a "Brewing Industry Survey—Fall, 1950," released by the Research Company of America. Other findings are:

Since mid-1930, beer has met increasing competition with the beverages in the soft drink field. At the same time, primarily because of economic considerations, beer has competed with some degree of success with other alcoholic beverages, notably distilled spirits.

Beer could reach an output level of some 95 million barrels a year within the next decade, as contrasted with a post-repeal peak to date of

88 million barrels. However, price factors and competition from other beverages strongly point to the need of an aggressive merchandising program.

The study is divided into five sections which include a chapter on history, economic and marketing analysis, complete with statistical data, financial reports of leading brewers, and a directory of breweries and annual sales figures for each company from 1945 to 1948.

Aid for Elmer and Elsie

ITHACA, N. Y.—A mobile laboratory, equipped with a refrigerator for storing blood samples, is traveling the roads of New York State to aid farmers who have breeding troubles in their dairy herds.

The laboratory, property of the Cornell University Agricultural Experiment Station, is pulled by a jeep.

Texas Wins Injunction, Penalties Against Easy For Anti-Trust Violations

AUSTIN, Tex.—Texas has won a district court injunction and \$7,500 in anti-trust law violation penalties from Easy Washing Machine Co. and seven of its Texas distributors.

Price Daniel, attorney general, charged the company had made exclusive territory agreements for the sale of its products with Joe Thiele, Inc., of San Antonio, Straus-Bodenheimer of Houston, Radio City Distributing Co. of Dallas, Momen-Dunnegan-Ryan of El Paso, and Southwestern Appliance Co., Amarillo. It was charged that each distributor was limited to a definite territory and there was price fixing between Easy and its distributors and between the distributors and dealers.

New Market Air Conditioned

NEW ORLEANS—Air conditioning is a feature of the new Puglia's Supermarket, 5523-35 St. Claude Ave., which opened Oct. 30.

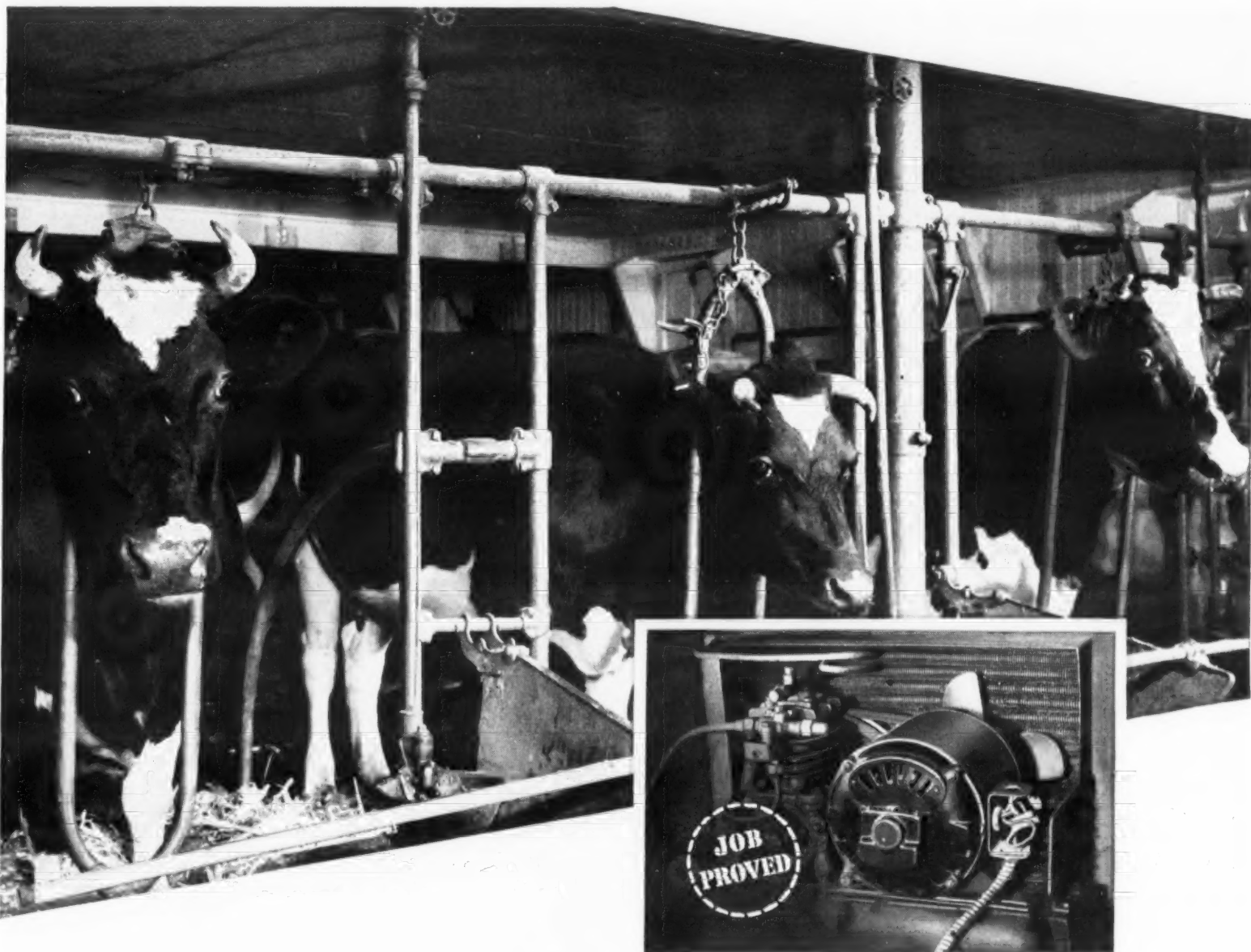
800 Spurn Ball Game for Air Conditioned Church On A Wednesday Night

ORANGEBURG, S. C.—While not in any way minimizing the deeply religious character of the people in this community, observers here believe that the amazing attendance of more than 800 persons at a Wednesday night prayer meeting at the First Baptist Church of Orangeburg late in August was due in part to the fact that the church is air conditioned.

The attendance mark was all the more startling in view of the fact that the popular local baseball team was playing a night game that night.

Refrigeration effect in the air conditioning system was handled by a Dole "Ice-Cel" refrigeration storage system, which handled the estimated 65-ton load very handily with a 7½-hp. condensing unit.

When the "stored refrigeration" effect was called upon, temperatures were pulled down to a comfortable point in less than an hour's time.



SUNISO ENDS STUCK VALVES

Trouble of Long Duration Quickly Ends When Compressor Is Charged with Suniso

For years a dairy had been handicapped by poor refrigeration. Compressor valves clogged, and required frequent cleaning—even replacements. One time, due to neglect of this condition, the compressor stuck, burning out the motor.

On another occasion the tubing completely stopped up, threatening the loss of the day's production. This meant another emergency call for the serviceman. But it proved to be the last one. He managed to

get the tubing cleaned by means of heat and carbon tetrachloride. Then he charged the compressor with Suniso Oil of the grade recommended for that kind of unit.

There has not been the least valve trouble since. In addition to solving a problem for the dairy, Suniso saved money for the service organization, for the account was on a contract basis.

Experiences like this explain why Suniso Oils are the predomi-

nant choice of original equipment manufacturers and servicemen throughout the refrigeration and air-conditioning field. Suniso Oils, available in six grades, have extremely low pour points, low wax separation points, and high dielectric strength. They offer unusual resistance to chemical change when mixed with Freon or other modern refrigerants. For a handy tool-kit card, showing Suniso recommendations for all types of compressors, write Department RN-11.

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Philco Names Cherry --

(Concluded from Page 1, Column 4) school, here. He became a field service engineer in 1939, and during the war was a supervisor of the radar-radio field engineers of the company's service division.

In 1945, Cherry was appointed a district sales representative handling sales of parts and accessories for the Southern Division of Philco. Two years later he was promoted to field service supervisor at company headquarters to direct the work of all accessory district representatives.

In 1948, he was named sales manager of the accessory division and then promoted to general manager of this division in 1949, achieving outstanding results in building up sales of electrical appliance parts and accessories.

In his new capacity, Cherry will be responsible for sales of both room air conditioners and home freezers.

'Free' Trials and Reg. W --

(Concluded from Page 1, Column 3) appliance let out for a home trial or demonstration or take the appliance back.

He must still do that, the board emphasized, when he offers the customer a 30-day trial. But he can take the down payment after 10 days with the understanding that if the customer is not satisfied at the end of the 30-day trial, his money will be refunded.

If the customer decides to keep the merchandise, the first monthly installment payment will be due within 45 days of the delivery date.

Policy on Freezer Tax --

(Concluded from Page 1, Column 2) terpretation and application of the excise tax on home freezers.

On the application of the 10% excise tax on certain components (compressors, condensing units, condensers, controls, evaporators, and absorbers) that are suitable for use in the manufacture of home freezers, there may be a better chance for an application of broad interpretations. Officials of Refrigeration Equipment Manufacturers Association reported that the bureau is giving consideration to dealing with the manufacturers through association contacts.

However, Ekstrand, in commenting on the tax on components, said that for the present, at least, the individual manufacturer should submit his own arguments and proof through literature and specifications that his product should not be taxed.

Bureau officials are said to have admitted that there is a good case for exemption from the tax of "remote-base" condensing units, as contrasted to the flat-base units which are obviously designed for self-contained cabinets or fixtures.

A remote-base condensing unit is one that is obviously not suitable for use in a home freezer or other small self-contained cabinet, and is generally characterized by a heavy, built-up base, and the use of a horizontal base.

They'll Be Wild About Harry

JACKSONVILLE, Fla.—Harry E. James, Inc., general insurance agency, has opened new and completely air conditioned offices at 502 Hogan St.

NLRB Jurisdiction To Cover Auto Dealers

WASHINGTON, D. C.—Franchised automobile dealerships are part of nationwide systems and therefore are subject to the jurisdiction of the National Labor Relations Board, the board ruled recently.

The board declared that because the place of business, its hours, service, facilities, location, and signs and advertising are controlled by the terms of the franchise, the dealership ceases to be a purely local operation, even though it is locally owned and sells only within the state.

The ruling, which is an application of the board's recently announced policy of asserting jurisdiction over integral parts of a multistate enterprise, was made in a case involving the International Association of Machinists and Baxter Brothers, a Chevrolet dealership in Fowler, Calif.

Gas Range Price Rise --

(Concluded from Page 1, Column 4)

The four manufacturers are the Tappan Stove Co., whose boosts averaged 3%; the American Stove Co., which upped prices of three of its 10 gas range models 4 to 5%; the Florence Stove Co., which added 3 to 5% on some of its models; and the Welbilt Stove Co., which jumped prices 4 to 5% on most models.

Bessemer Gets New Store

BESSEMER, Ala.—Westinghouse appliances are featured by Chew Furniture Co. at its new store.

Refrigerator, Range Sales Termed Just 'Replacements'

ATLANTA—A sharp increase in the replacement market for "high saturation" appliances such as refrigerators and ranges since the outbreak of the Korean conflict was pointed out recently by Edward R. Taylor, general sales manager of Hotpoint, Inc.

Speaking before the Southeastern Electric Exchange general sales conference here, Taylor claimed that this new practice of replacing serviceable appliances with new units in the belief that new merchandise may not be available later on is robbing the market of future buyers.

He said that Hotpoint's sales of refrigerators have jumped from a normal 46% to the replacement market to 67% since Korea. Replacement range sales have mounted from 22% to 36%.

Factors now limiting the consumer's ability to buy, according to Taylor, are tightened credit controls, the high income tax and possibility of higher taxes, boosts in living costs, uncertainty about military status by young men and women, and shifting of labor to defense areas.

Agency Moves To Protect Small Firms Steel Supply

WASHINGTON, D. C.—In an effort to protect as far as practicable the source of steel supply for small businesses, the National Production Authority last week issued an order requiring steel producers to establish regular allotments of steel for purchase by steel distributors based upon their average monthly purchases during the first nine months of the year.

The order also provides special rules for the extension of "DO" (defense order) rated orders by steel distributors and specifies a tonnage limitation and item limitation for required acceptance of rated orders by them.

It was noted, however, that these allotments to distributors will be determined after the mills have filled all "DO" orders and filled requirements of special defense programs.

Warehouses are not required to take "DO" orders calling for delivery in any one quarter of more than 30% of their average quarterly shipments in the first nine months of this year.

Bucholzer Airtemp Pres. --

(Concluded from Page 1, Column 3) try, joined the Chrysler organization in 1933 as a graduate student in the Chrysler Institute of Engineering. He took a master's degree in mechanical engineering in 1935. In 1942 he was appointed chief engineer of the Dodge Chicago plant, and in 1945 he returned to Detroit as assistant to the president and general manager in charge of subsidiary operations. In 1947 he was made president of Airtemp.

'Stand-by' Ad Programs Urged Even If Output Down

MINNEAPOLIS—Most companies converting to military production will find it imperative to continue aggressive advertising when they have few or no units to sell, according to Frederick B. Heitkamp, vice president of ATF, Inc.

Addressing the annual Upper Midwest Sales Conference, he urged sales managers of such companies to determine what advertising allowances will be permitted by the government.

"Find out now from your company's legal and tax consultants what portion of your company's income may be allocated for advertising and plan now to use it most advantageously to protect your long-term investment in your products," he said.

Sales of Independent Dealers In Sept. Up 47% Over Year Ago

WASHINGTON, D. C.—Independent household appliance dealers enjoyed sales during September that were 47% higher than in September, 1949, the U. S. Department of Commerce reported recently.

For the first nine months of the year, their sales were 34% greater than in the corresponding period of 1949.

Wis. Aluminum Foundry Ups Pressure Cooker Prices 8%

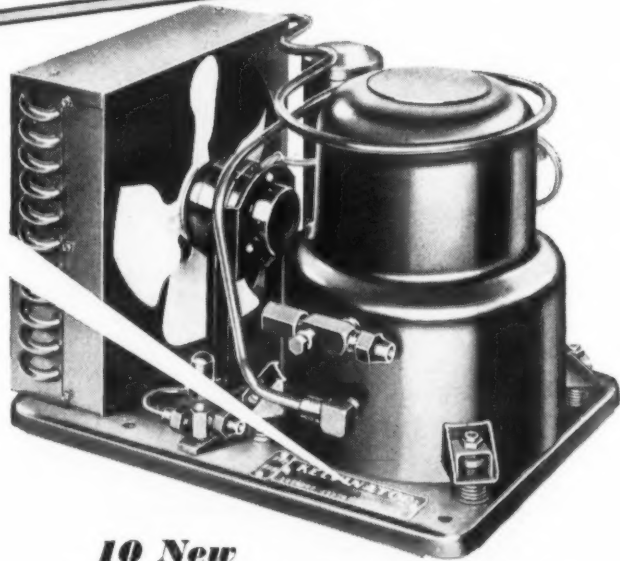
MANITOWOC, Wis.—Wisconsin Aluminum Foundry Co., Inc., has announced a 8% increase in the prices of its All-American pressure cookers.

Use this Calling Card to "Re-Call" Customers...



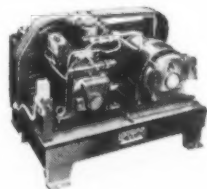
Garner your share of tomorrow's market . . . by selling Kelvinator today! Proof? Kelvinator has met the needs of customers . . . with extra-values . . . over 36 years! See, for instance, Kelvinator's wide range of ten, hermetic-type condensing units in sizes up to and including 1/2 H.P. Each is built to Kelvinator's precision-tested standards. Each is competitively priced and bears the name users immediately associate with top quality.

Your next job? Choose Kelvinator. You'll have the right condensing unit . . . and repeat business will prove it. For complete information call your nearest Kelvinator Distributor or Zone Office. Kelvinator, Division of Nash-Kelvinator Corporation, Detroit 32, Michigan.



10 New Hermetic Condensing Units

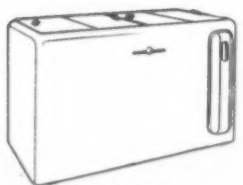
Kelvinator also makes available to you 15 open-type condensing units from 1/4 to 5 H. P.



PROFIT TODAY...BUILD FOR TOMORROW WITH

Kelvinator

THE NAME THAT SELLS...THE NAME THAT SATISFIES!



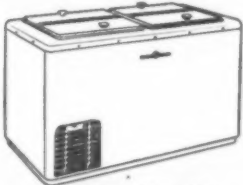
KELVINATOR BEVERAGE COOLER



KELVINATOR FROZEN FOOD MERCHANDISER



KELVINATOR WATER COOLER



KELVINATOR ICE CREAM CABINETS



KELVINATOR AIR DRIER

No better Protection against Moisture

DAVISON

PA 100

REFRIGERATION GRADE SILICA GEL

● Try other drying agents if you like. You'll find none can do the job of policing moisture as well as PA-100. For exhaustive tests prove it can dry refrigerants to moisture levels that cannot be reached by other refrigerant drying agents. That's real protection! One of the many reasons PA-100 is preferred.

Others are: Safer protection, as PA-100 cannot cause corrosion, actually helps pre-

vent it by removing corrosive compounds from the system. It can be left in the system indefinitely without caking, dusting, deliquescing or channeling refrigerants. Give the systems you service the best protection possible. Order Davison PA-100 Refrigeration Grade Silica Gel from your jobber. He has it in either cartridge bulk can form.

*T. M. Reg. App. F.

Progress through Chemistry

THE DAVISON CHEMICAL CORPORATION

Baltimore 3, Maryland

Pioneers and Developers of Silica Gel
CANADIAN EXCLUSIVE AGENTS FOR DAVISON SILICA GEL:
CANADIAN INDUSTRIES LIMITED, SALES DIVISION, CHEMICALS DEPT.

Public Gets First Taste of Sealtest Concentrated Milk

WILMINGTON, Del.—A new product—Sealtest concentrated milk—is put on sale here recently for the first time anywhere by National Dairy Products Corp.

The product, which is said to taste the same as regular milk, is not a condensed or an evaporated milk. It is simply fresh whole milk from which most of the water has been removed.

The fluid has the consistency of cream. To use it, two parts of cold water are added to the concentrate. The result is a full quart of homogenized vitamin D grade A milk.

No special handling is required for Sealtest concentrated milk. It is refrigerated and cared for in the same way as conventional milk.

Several advantages are cited for the product. For one thing, it is said as one way to reduce the high cost of distributing milk. Today's high milk prices, it was pointed out, are due to the cost of transporting milk from the farm to the bottling plant in the city and from there to stores or homes.

Further savings are visualized after the concentrate is packaged. The route truck that now carries a hundred quarts of milk on a full load would be able to transport the equivalent of 300 quarts when carrying the concentrate, it is said.

Versatility and compactness are other advantages claimed for the product.

Regarding the former, it was stated that when the concentrate is mixed with equal parts of water, it becomes an extra rich cereal milk similar in taste to light cream. Used at full strength, it reportedly is a rich, full-bodied product that can be used instead of cream in coffee and tea.

As for compactness, the container is only a third the size of the conventional quart container. Thus, housewives will have more space in their refrigerators for other items, it was noted.

National Dairy plans to introduce the concentrate in Ashtabula and Lima, Ohio, later on. Other markets will be added as quickly as demand develops.

W. E. Darden Acting as Mfrs.' Agent on Coast

SAN FRANCISCO—William E. Darden has announced that he is now acting as a manufacturers' agent on the Pacific Coast, with headquarters in the Western Merchandise Mart here.

Darden was formerly western manager for Prest-O-Lite Co., Inc.; Pacific Coast manager, E. T. Cunningham Co., Inc.; sales manager, Ernest Ingold Co., Inc.; and sales manager, manufacturers sales, Hammarlund Mfg. Co., Inc., located in New York.

His sales activities now cover the western states and the Hawaiian Islands.

Neb. Locker Plant Includes Refrigerated Offal Room

DAVID CITY, Neb.—The new David City locker plant, operated by Richard Reid, has started the processing of hogs and cattle, and the plant includes the only refrigerated holding room for offal in Nebraska if not in the country, according to Reid. Other modern equipment includes a scalding vat as well as an automatic dehairing machine for hogs.

Independent Grocery Field Narrower

With More Money, Patrons Depend Less on Small Grocer

NEW YORK CITY—One commercial refrigeration distributor's view of changing sales patterns in the "enclosure" field, as it's sometimes called, were outlined before the National Commercial Refrigerator Sales Association at its fourth annual convention here by I. Rosenberg, Jr., Pittsburgh operator.

"Before the chains came into the picture, the independent grocer was our best customer. At that time we distributors had to be familiar with the meat, dairy, and grocery business, and had to know fixtures.

"First, we got the grocer or butcher into the delicatessen business, and then into the dairy business, where originally he was either just a grocer or a butcher," Rosenberg recalled, indicating that the commercial refrigeration distributor played an important role in the early modernizing of the food store.

At that time, too, he said, while

many manufacturers offered planning services, those distributors located far from the factory had to do their own store planning for their customers.

"Since World War II the lowly wage earner has had a much better income, and can pay cash for his food purchases. He doesn't need credit. The chains are bidding strongly for this new hidden volume which the independent grocer previously had through his offer of credit and charge accounts.

"Now the wage earner shops where he thinks a dollar goes the farthest. This doesn't mean the end of the independent grocer, but the field is being narrowed down. This further means that there is a smaller field for our commercial refrigeration salesmen," Rosenberg declared.

"A salesman needs at least \$75 a week, which he can get for driving a truck. After all," he emphasized,

"a refrigeration journeyman can earn \$5,000 to \$6,000 a year without too much overtime, and a salesman should be able to make that much.

"Actually, as commercial refrigeration distributors we don't have much to hang onto, but through NCRSA I think we can go forward."

New Plastray Plant To Be In Operation This Month

DETROIT—Its new 9,000-sq. ft. plant on W. Eight Mile Rd. here is scheduled to be in operation this month, Plastray Corp. has announced.

Cost of the plant, including equipment, was set at about \$100,000 by Douglas L. Jocelyn, sales manager. The plant is expected to employ between 30 and 40 workers.

Plastray manufactures plastic and aluminum products, including ice cube trays.

Tenney Markets New Servo Unit for Use With Special Machines

NEWARK, N. J.—A special "packaged" variable temperature producing Servo unit has been placed on the market by Tenney Engineering, Inc., here. This new Servo unit is designed for use with Scott Tester's tensile testing machines, Instron machine impact testers, and similar equipment.

Thanks to precise control instrumentation, temperature accuracies of plus or minus 1° F. are possible with the new Servo unit. The necessity for passing CO₂ vapors through the conditioning space has been eliminated.

This new model is the latest addition to Tenney's standard line of Servo units for producing temperature-controlled air ranging from -90° F. to 350° F. Specialized units, giving controlled humidity conditions, are also available for use in the textile and plastics fields, it is pointed out.

the hot line
for cold drinks is



MODEL 3508 WALL TYPE BEVERAGE CASE

Great capacity . . . tops in display! This case is loaded with 73 cases of bottled beverages . . . 1092 separate containers, including quarts, cans, and other standard beer containers. As business goes down, beer sales go up. Good times or bad, beer sells fast . . . and Koch is the way to sell it at a profit.

THE ZEROSTREAM BEVERAGE COOLER

Here's the last word in clean, dry, cold bottles . . . served even at freezing, or lower if you like. Ideal for bar service because the doors slide up and out of the way for faster service and easier selection. No slimy bottles or slippery labels. Available in capacities of 18 or 30 cases, remote or self-contained.



KOCH REFRIGERATORS
North Kansas City 16, Mo.

Send me, at once, complete information on the Koch line of refrigerators and display cases.

Name.....

Address.....

City..... Zone..... State.....

KOCH Refrigerators

NORTH KANSAS CITY 16, MISSOURI SINCE 1883

With Every
ICE MAKER...

Use **Filtrine**
HIGH EFFICIENCY

SAVE SERVICE —
REMOVE TASTES, SOLIDS

FILTRINE MANUFACTURING COMPANY
Brooklyn 5 New York

Calif. Packers Finding Wide, Growing Market For Frozen Lemon Juice

LOS ANGELES—What frozen orange juice has meant to Florida growers, frozen concentrated lemon juice is becoming to the California lemon industry, a recent survey reports.

The study found growers, merchandisers, and the public excited over the possibilities of the concentrated juice that was the second best frozen fruit seller last summer.

One distributor stated: "I've been merchandising for 35 years and I've never seen anything take hold like this frozen lemonade mix."

In addition to retail sales to housewives, one packer has started to sell it to soda fountains and found those who tried it very well satisfied with results.

Though lemonade is tagged in the consumer's mind as a summer drink, distributors are trying to promote its year-round use.

Virgil Tyler, general manager of Ventura Coastal Lemon Co., said, "Almost any place sweetened lemon juice is used, frozen lemonade can be substituted.

"A few bakeries, for example, are using it to make lemon pies. Some housewives are using it for cooking. And people are discovering that it makes a good highball mixer."

The survey reported that more than 2,000,000 gals. of lemonade have been packed this year and from 6,000,000 to 10,000,000 are expected to be packed next year.

Free Bus Rides, Orchids, Pens, Photos Help Lure 21,000 to 'Carnival'

HUNTINGTON, W. Va.—Spending \$300 to lease three city buses, which carried prospects to a three-day "carnival" in the store, helped provide no less than 21,000 visitors recently for Frankel's Appliances, Philco dealership here.

Rental of the buses was only part of the huge promotion staged by Fred Schwartz and Harold L. Frankel, heads of the firm. Despite the threat of limited appliance delivery, the two determined to stage the "biggest appliance promotion the community has ever seen" and used a lot of stunts to accomplish this objective.

First, the buses served as "rolling billboards" with huge signs offering free gifts, free television entertainment, etc., for those who came to the store.

Next, a program of "teaser advertisements" asking simply "Where is Frank and Phil?" were run in local newspapers. More than 500 radio announcements of the same nature were used.

When the store opened for the big event, 6,000 orchids flown from Hawaii were available, as well as 3,000 ball-point pens as gifts to men, and as many more novelties for children.

The store was kept open from 10 a.m. through 10 p.m. Over the three-day period, 10 salesmen sold 403 units, including television sets, refrigerators, home freezers, ranges, and automatic laundry equipment.

As a novel stunt, a commercial photographer was stationed on the floor to shoot "family groups." Eight by 10-in. copies of pictures were given to the prospects in return for authorizing use of the pictures for future newspaper advertising.

"It was easily the biggest such stunt ever pulled in the state," Frankel declared, "and through attracting 21,000 people and selling 403 units, we did more than three times the business we felt necessary to pay operating costs."

AIRCO stands for

Fast, dependable, world-wide service.

Refrigeration and Air Conditioning parts and supplies.

Write for current Catalog

AIRO SUPPLY CO.

2732 N. Ashland Ave., Chicago 14, Ill.

Baker Sells Frozen Items From Freezer Out Front

DENHAM SPRINGS, La.—Installing a Westinghouse 16-cu. ft. home freezer in the front of his bakery, in the "lobby space" between the windows and service counter, has proven an excellent investment for J. H. Kelly, owner of Kelly's Bakery, here.

The big freezer makes it possible to keep on hand a complete stock of frozen pies, frozen baked goods, and frozen rolls, all of which have become favorites with Kelly's patrons.

The freezer is large enough that Kelly can do all of his "frozen goods" baking over the weekend, and maintain an ample stock in the box to last until Wednesday night, when the process is repeated for Friday and Saturday selling. The result is the sale of around a hundred dozen sharp-frozen rolls per week, approximately 120 pies, and a similar volume of other delicacies.

"The ability to maintain sharp-frozen storage in this way is the only way we could maintain such a volume," Kelly said.

How Much for Old Box? Card File Gives Salesmen Right Answer In Instant

OKLAHOMA CITY—One effective means by which the major appliance dealer can hold down operating cost in the face of allocations and other restrictions, is to simplify trade-in allowance systems, in the experience of the John Brown Co., Frigidaire dealer here.

The Brown Co., which operates a huge, 125 by 75-ft. separate appliance store away from the parent department store in downtown Oklahoma City, has developed a system whereby any of the firm's 25 salesmen can make trade-in allowances over the phone, without any necessity of visiting the new-refrigerator prospect's home to examine the appliance. Only in rare cases is it necessary for a representative of the store to leave it for trade-in appraisal—perhaps only three or four out of one hundred, according to the management.

The secret is a meticulously-kept cardfile, maintained in the buyer's office, which is a complete, down-to-the-minute record on every refriger-

erator which has been sold by the firm during the past 10 years. These cards, especially printed for the Brown Department Store, are much larger than usual, and contain spaces for information on the original sale, installation details, the number of service calls which have been made on the box, its appearance at each call, and even a box in which a description of the way in which the housewife normally maintains her refrigerator is jotted down.

Thus, every card is an actual "case history" which indicates at a glance whether the refrigerator has needed too-frequent repairs, whether the housewife is conscientious about maintaining the refrigerator's interior and exterior appearance, etc. All of these factors are weighed when a prospect calls in for a new refrigerator, and it is possible to "snap out" a trade-in allowance figure with a high factor of safety.

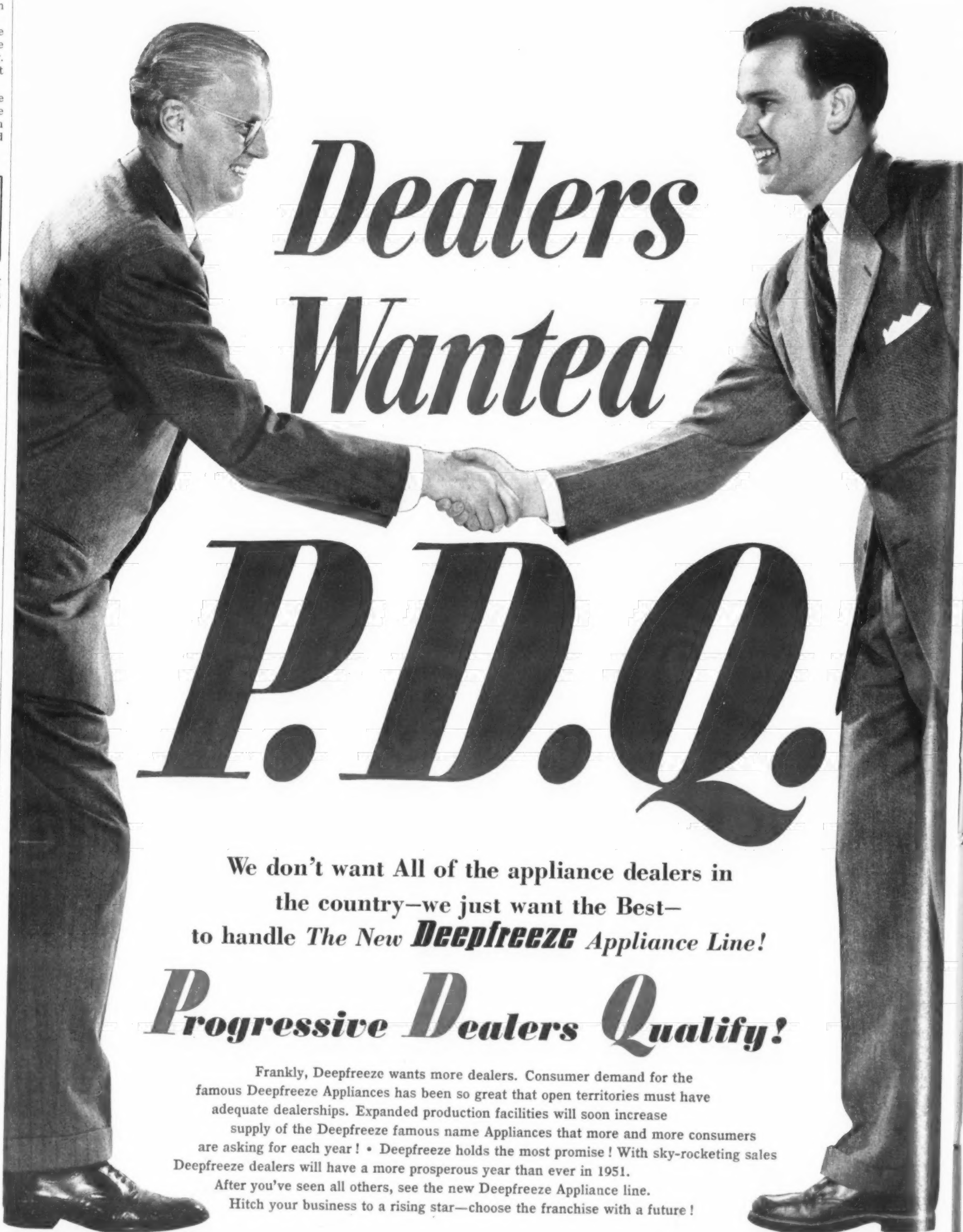
Only once or twice a year does a refrigerator fail to live up to the estimate which has been made from

the card, and these losses, the Brown Co. cheerfully accepts as real economy when compared with the thousands of miles of driving, and the huge number of man-hours normally required in making appraisals in prospect's homes.

When a trade-in offer is accepted, and the new model is shipped out, a second card is immediately made out on the new refrigerator, which the first "case history" card moves to a "trade-in file" to similarly govern any future transactions. The trade-in box is again offered to its purchaser on a new box. Thus, there is one active card on file for every refrigerator which has been sold by the firm.

Opens Montgomery Store

MONTGOMERY, Ala.—Rush Stalings, Inc., has opened a new electrical appliance and home supply business at 218 Lee St., carrying a large line of refrigerators, radios, ranges, and various small appliances.



Dealers Wanted

P.D.Q.

We don't want All of the appliance dealers in the country—we just want the Best—to handle *The New Deepfreeze Appliance Line!*

Progressive Dealers Qualify!

Frankly, Deepfreeze wants more dealers. Consumer demand for the famous Deepfreeze Appliances has been so great that open territories must have adequate dealerships. Expanded production facilities will soon increase supply of the Deepfreeze famous name Appliances that more and more consumers are asking for each year! • Deepfreeze holds the most promise! With sky-rocketing sales Deepfreeze dealers will have a more prosperous year than ever in 1951. After you've seen all others, see the new Deepfreeze Appliance line. Hitch your business to a rising star—choose the franchise with a future!

Distributor Video Show Aimed at Both Salesmen And Customers

CLEVELAND—The Arnold Wholesale Corp. recently conducted a successful dealer sales meeting via television over television station WXEL. Feeling that a properly constructed television program would have interest to the public and still be of immense value to dealers and their television salesmen, R. C. Hager, president of the distributorship, sponsored an hour-long show built around a tour of the TV station. The program, running from 11 a.m. to noon on Sunday, showed each segment of the equipment and personnel of the station as it contributed to the ultimate home picture. Comparison of studio and home equipment was shown. The commercials were devoted to exclusive features of the 1951 Zenith television line. To insure salesman interest in the program, prizes were offered for the correct answers to 10 product information questions.

Suburban Dealers Draw over 5,000 Patrons By Pooling Effort In 'Harvest Festival'

LINCOLN, Neb.—Appliance dealers in suburban University Place reported that over 5,000 persons attended their second annual Harvest Festival.

Ralf Holmes, proprietor of the Holmes Electric Co. and chairman of the festival committee, pointed out that the event has been effective in creating goodwill for University Place merchants and attracting new customers.

The festival was staged under the auspices of the University Place Business Men's association, whose members contributed approximately \$1,000 in free merchandise to spark the celebration. Holmes, for example, contributed an Everhot electric roaster.

Stores remained open until 8 p.m. to enable visitors to become acquainted with the merchants, look over new merchandise, and register for a chance on attendance prizes

given away during the event.

Festivities got under way at 5:30 p.m. with contests for youngsters. Winners in races, balloon blowing contests, etc., were awarded prizes including a bicycle as first prize. Free prize presentations were made from 8 p.m. to 9 p.m., after which free street dancing prevailed from 9 until midnight. A flower show and a band concert were other attractions of the festival.

Green Furnace & Plumbing Co., Inc., held open house for its new showrooms displaying kitchen cabinets. A large Lennox circulating fan was given away by this firm, which is managed by Everett Green and handles air conditioning as well as heating equipment.

Other appliance firms participating in the promotion were Thomas Hardware, Kelly's House Keeping Shop, Armstrong Furniture, and Paramount Supply Co.

Suit Tests CBS Color Video Ruling Nov. 14

CHICAGO—Nov. 14 has been set as the date for the hearing of Radio Corp. of America's suit for an injunction against a Federal Communications Commission order permitting the Columbia Broadcasting System to start color telecasting Nov. 20.

The suit will be heard in Federal District Court here by Philip L. Sullivan and Walter La Buy, Federal District judges, and J. Earl Major, chief judge of the Seventh U. S. Circuit Court of Appeals.

At the preliminary hearing, counter motions for summary judgement were filed by the government and Columbia lawyers.

Two motions for leave to intervene were filed, one by Pilot Radio Corp. and the other by CBS.

Pilot, which recently withdrew an injunction request similar to the RCA suit, asked that it be permitted to intervene for the plaintiff when the case is heard.

CBS asked that it be allowed to support the government's defense.

New Credit Curbs 'Strangling' Dealer, NARDA Letter Claims

CHICAGO—A letter protesting the tightening of instalment credit controls by the Federal Reserve Board was directed to President Truman recently by the National Appliance and Radio Dealers Association.

Signed by Ira L. Lavin as acting managing director, the letter also called attention to the "confusion existing in the mind of the average small retail businessman" over such other government action as the ruling on color television, the imposition of new excise taxes on home freezers and television sets, and the issuance of housing credit curbs.

Concerning Amendment 1 to Regulation W, the letter said:

"We agree that perhaps Regulation W as it stood on Sept. 18 was not as effective as hoped for. Curbing an inflationary spiral is definitely a serious matter and perhaps 21 days of test was sufficient in judging results.

"We think not, but we cannot be right all the time. We do, however, believe some consideration should have been given to the effects on our economy if the regulation was to be tightened.

"The resultant action of Amendment 1 is that the average credit buyer cannot dream of placing 25% down and mounting payments to squeeze into 15 months.

"That does have the effect of curbing the inflationary spiral, but it also has the effect of strangling retail inventories that must be moved if the average small businessman is to remain an attribute to his family and his community.

"Certainly, Amendment 1 could have been held up until such curbs that we understand will be levied on critical materials had the effect of curbing production and lessening inventory.

"Or if sufficient time had been allowed with only a slight tightening of credit controls, then the small businessman could have prepared his financial position to meet a necessary governmental move.

"Mr. President, I pray that you will seek the indulgence of your agencies to reconsider the positions that have been taken and to either justify to your satisfaction and to the satisfaction of the public that those moves were sound for the overall economy of our country or take the necessary remedial steps to rectify the irreparable harm they certainly will do if these actions are allowed to continue unchanged."

Ark. Frozen Foods Distributor Plans To Build \$100,000 Plant

LITTLE ROCK, Ark.—Plans for construction of a \$100,000 plant at Capitol Ave. and McClain St. here have just been announced by Sam M. Vogel's, Inc., North Little Rock frozen foods distributor. Offices in the new plant will be air conditioned, Vogel stated.

Here's Why...

**Expect to Be Surprised!
Wait Until You've Seen
the Outstanding
NEW Deepfreeze Appliances!**



There's plenty of brand-new sales appeal in *all* the Deepfreeze Appliances for 1951.

Deepfreeze again scoops the appliance industry—with new revolutionary

features your customers have wanted for years. The wonderful new Deepfreeze products

bear the famous trade name consumers count on for dependability and quality.

Appliance dealers *know* they can't go wrong when they... **Go Buy the Name.**

**In '51—Go Buy the Name—
Deepfreeze**

TRADE-MARK REG. U. S. PAT. OFF.

HOME FREEZERS • REFRIGERATORS • ELECTRIC RANGES • ELECTRIC WATER HEATERS

DEEPFREEZE APPLIANCE DIVISION, MOTOR PRODUCTS CORPORATION, NORTH CHICAGO, ILLINOIS

© 1950 Deepfreeze Appliance Division, Motor Products Corporation

See Your Distributor—P.D.Q.

for details about the
greatest appliance franchise in 1951!

Your Deepfreeze franchise gives you a head start for greater appliance profits in 1951. Have your Deepfreeze distributor explain it in detail—find out what Deepfreeze is going to do in the coming year to help you sell! Check the national advertising program and many other practical selling aids with him. You can share in the great new Deepfreeze profits from the very start!

—or Send Coupon for All the Facts!

Deepfreeze Appliance Division
Motor Products Corporation, North Chicago, Ill.

Gentlemen:

I'm interested in the greatest appliance franchise for 1951!
Send me P.D.Q. the complete story.

Name _____

Address _____

City _____ Zone _____ State _____

IT'S A FACT!

**NATIONAL
DRY BEVERAGE COOLERS**

Are more EFFICIENT

Whether you select the CHAMPION with the deluxe slide-up doors and automatic inner-lighting; the MIRACOL (flat-top); or the STANDARD model, you're assured of the finest in economy and efficiency. Write for our new and colorful 1950 Cooler brochure, and our catalog on stainless steel food service equipment.

NATIONAL COOLER CORP.

1600 Woodland Ave., Cleveland 15, Ohio

The Champion



ILLUMINATED FLOOR DISPLAY with unique adjustable feature is available to Revco Chill Chest dealers. Designed to accommodate all Chill Chest models (15-cu. ft. model shown) the side columns can be moved outward or inward on overhead rods of the display. Lightweight, sturdy corrugated board is used in the display, wood rods are employed overhead. Red-orange, dark blue, and white are the colors used against a cool grey background. Center sign is illuminated, flasher type, with figure and lettering on transparent material.

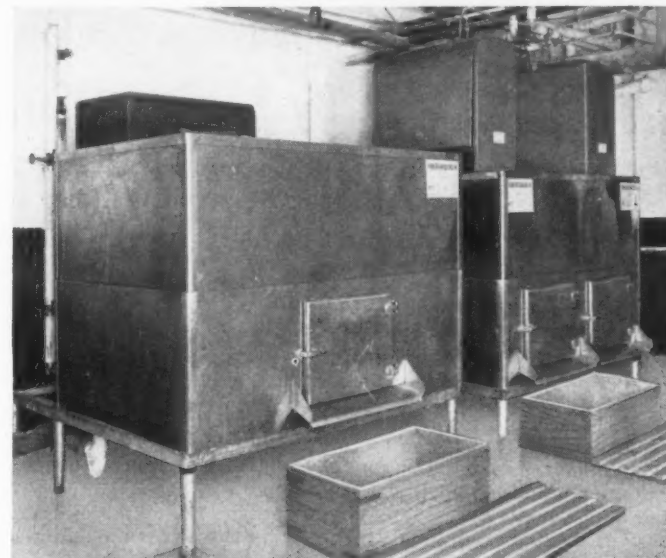
Orren Directs Coolerator Field Service Engineers, Factory Service Schools

DULUTH, Minn.—E. S. Orren has been appointed supervisor of Coolerator field service engineers, it was announced recently by John E. Unger, Coolerator service manager.

He has been associated with The Coolerator Co. since 1932, starting in the accounting department and joining the service group in 1946. He attended the University of Minnesota.

In his new position, Orren will direct all Coolerator field service operations and will head up the Coolerator factory service schools for distributor and dealer servicemen, which are scheduled to begin on Jan. 15.

Orren succeeds Frank Wheeler, who resigned to become a Coolerator district sales manager.



ICE MAKING EQUIPMENT led the list of new refrigeration equipment installed in the modernized and expanded club house of the Knights of Columbus in Brooklyn. Also included were a water cooler, beverage cooler, four walk-ins, three reach-ins, a beer storage box, and a beer cooling system.

Assn. Charges Pa. Utility With Unfair Competition

HARRISBURG, Pa.—The United Counties Warm Air Heating Association, of Sharon, complained to the Public Utility Commission that the United Natural Gas Co., Oil City, "is engaging in unfair competition with private dealers in the sale of appliances."

The association, composed of dealers, asked the PUC to direct the utility to eliminate sale of gas appliances and confine its operations to the sale of gas.

Heating, Cooling Engineers Hold Back Knowledge—Avery

SYRACUSE, N. Y.—Heating and air conditioning engineers know more than they are putting in practice, according to Lester T. Avery, president of the American Society of Heating and Ventilating Engineers and head of a Cleveland contracting firm, who recently addressed the Central New York chapter of ASHVE at the University club here.

Denying that "everyone wants a different temperature," Avery said there is a temperature that is effective and comfortable for nearly

everybody. He cited experiences with greatly expanded use of controlled conditions in war plants for increased productivity and comfort of workers.

When seated quietly in a calm state, an individual generates enough heat to be equivalent to a 100-watt bulb, he declared, explaining that it's more like the heat of candle as the individual gives off some moisture along with the heat.

"In case you are a bright and shining light, when you 'get hot' or 'get on fire,' you speed up to a

300 or 400-watt light. The point is that you don't need heating. You are generating heat, so the environmental air is actually the medium that removes heat and keeps you from burning up.

"This concept throws additional responsibility on the heating engineer," Avery pointed out. "It is not sufficient merely to provide too much heat. The body (the vital organs) is 98.6° F., but the skin temperature ranges from 80° to 90°, with an average of 85°. So the nude body is in balance if the environmental air is around 85° F. and not too moist.

"Your clothes—men's clothes—are insulating materials protective for about 10° to 12°, so the normally clothed person loses his metabolic heat in an orderly way when his environmental air is about 75° F.," Avery said.

At this meeting the local chapter also paid tribute to two former presidents of ASHVE; the late Dr. Willis H. Carrier, chairman emeritus of Carrier Corp., and William H. Driscoll, a Carrier vice president.

G-E Dept. Names Barrick To Business Training Post

BRIDGEPORT, Conn.—Boyd B. Barrick has been appointed supervisor of the business training course for the General Electric Co.'s appliance and merchandise and construction materials departments.

A graduate of the University of Illinois, Barrick joined the company at Schenectady, N. Y., in 1947, and became assistant to the business training course manager last year.

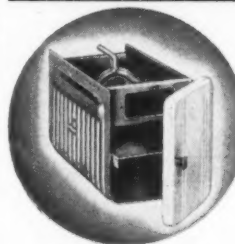
Brooklyn K of C Installs Modern Refrigeration

BROOKLYN—When the Knights of Columbus Club on Prospect Park West here expanded its facilities for members, it also completely modernized its refrigerating system.

Included in the club's institutional refrigerating equipment are seven York condensing units, a Flakice machine, and two automatic ice makers, all supplied by York Distributors, Inc., of Long Island City.

The equipment includes a stainless steel water cooler, a special dry beverage cooler, four walk-in refrigerators for meats, vegetables, dairy products, and general storage, three reach-in "short-order" boxes, a beer storage box, and Yorkflo beer system.

MORE FROZEN FOOD STORAGE EQUALIZED REFRIGERANT DISTRIBUTION



REMOVABLE
SHELVES
•
FULL LENGTH
DOOR
•
CONCEALED
CONTROL
MOUNTING

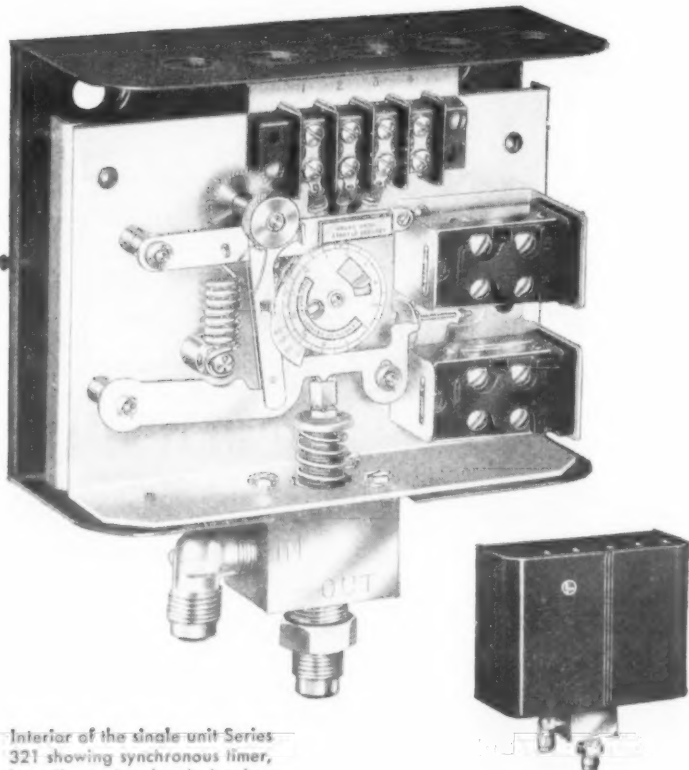
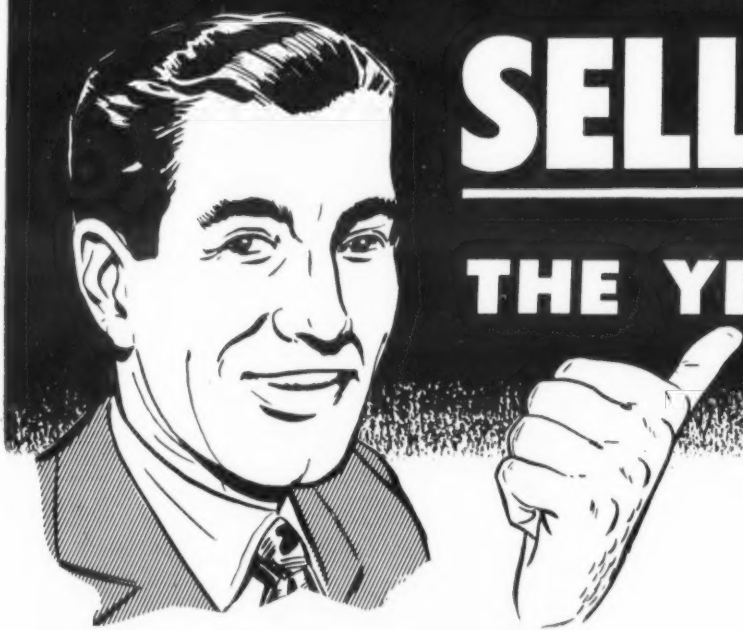
Stainless Steel, all refrigerants, Evaporators. Sizes 3½ to 10 cubic feet.

Write for bulletin E-5

STANDARD REFRIGERATION CO.
332 S. Hoyne Ave., Chicago 12, Ill.

STANDARD STAINLESS STEEL EVAPORATORS, LIQUID RECEIVERS, COUNTERFLOW CONDENSERS, SHILL AND COIL CONDENSERS

AUTOMATIC HOT GAS DEFROSTING SELLS FAST THE YEAR 'ROUND



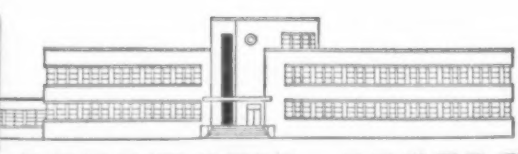
Interior of the single unit Series 321 showing synchronous timer, heavily spring-loaded valve, two-pole snap-acting contact structures and ease of wiring.

PENN's Series 321 Hot Gas Defroster is a "natural" for every food market. There's never been anything like it. It keeps evaporator coils frost-free . . . and does it *automatically*! It's wanted by refrigeration users everywhere because it keeps systems at peak efficiency . . . saves time . . . saves trouble . . . saves food . . . protects profits.

Evaporator coil defrosting . . . with Series 321 . . . is fast and positive. At regular intervals, hot gases are pumped directly from the compressor through the evaporator coil. It eliminates objectionable rise in product temperature. And cost of installation and operation is low!

You get new profit opportunities with the Series 321 Hot Gas Defroster in a large untapped market. It's easy to install on frozen food cabinets, meat cases, etc., either blast coil or gravity jobs. Learn more about it . . . ask your wholesaler or write Penn Electric Switch Co., Goshen, Indiana. Export Division: 13 E. 40th Street, New York 16, U.S.A. In Canada: Penn Controls, Ltd., Toronto, Ont.

PENN



AUTOMATIC CONTROLS

FOR HEATING, REFRIGERATION, AIR CONDITIONING, PUMPS, AIR COMPRESSORS, ENGINES, GAS RANGES

ANNOUNCEMENT

NOW OPERATING IN OUR NEW
MODERN GROUND FLOOR PLANT
IN HOPKINS, MINNESOTA,
ADJACENT TO MINNEAPOLIS

AMERICAN REFRIGERATION CORP
HOPKINS, MINNESOTA

BOTTLE COOLERS • SELF SERVICE CASES
FREEZERS • FROZEN FOOD MERCHANDISING
CABINETS • BEVERAGE DISPENSERS

American the Aristocratic Line

Write for Catalog

Manufacturers CAN Stimulate Sales

They Can Assist Commercial Distributors by Anticipating Future Trends, Advising on Promotions, Helping Train Salesmen, Hill Tells NCRSA Parley

NEW YORK CITY — "The Manufacturer's Role In Bringing About Greater Sales," as his talk was entitled, involves three basic functions: provision for financing, manufacturing of good products, and promotion of sales—declared C. V. Hill, Jr., president of the C. V. Hill & Co., Inc., in an address before the National Commercial Refrigerator Sales Association at its fourth annual convention here.

The problem of financing, he explained, "involves first the manufacturer's strengthening his own position by providing proper floor planning and credit for himself and the distributor, and second, building up the distributor's position through local financing."

The manufacturer also has to be careful of his own operation because otherwise the expense of financing will show up in the price of his product.

Recently, Hill said, "I asked a distributor what the manufacturer could best do to help sales."

"Why," he replied, "just cut the price 25%."

"It is true, however, that we manufacturers must keep up and try to be ahead in our manufacturing technique. And in addition to this the manufacturer must prepare for change."

"You old smokers probably recall Bull Durham, the smoking tobacco, which was heavily advertised. Then public tastes changed to manufactured cigarettes. At first American Tobacco increased its advertising of Bull Durham, but as the change in public taste became definite, American started pushing Lucky Strike cigarettes instead."

PUBLIC EXPECTS CHANGE

"This simply illustrates that manufacturers have to change. Every product," Hill commented, "in order to continue must have improvements and changes. The public expects it."

"Manufacturers, more important, have to anticipate future changes before they happen, not afterwards. He must do research, engineering, and development, and if he doesn't your sales will suffer. Incidentally," he said, "our really important developments and changes have come from you distributors."

As for the manufacturer's responsibility in promoting sales, Hill indicated there are two schools of thought: that the manufacturer should simply guide the distributor's sales organization, or that he should do active promotion.

"I have known of a distributor who was called in by a customer that wanted to go into a self-service meat operation. The customer apparently knew so much about it that the distributor merely took the order."

"As it turned out, though, the merchant hadn't carefully looked around at existing self-service stores, and the wrapping girls know nothing

about packaging. The packages came open, the meat turned black. Before the change the merchant had been doing \$2,000 a week. In three weeks his meat volume went to zero."

"The distributor was at fault here because he should have advised his customer about some of these problems instead of merely taking the order. I also blame the manufacturer in not advising the distributor properly."

To cite a specific example, Hill mentioned the fact of film's being scarce with all the manufacturers of film now operating on an allocation basis.

"There are 250 to 300 open cases being delivered a day, and all are designed for products that must be wrapped in film. If there's a scarcity, someone's going to get stuck. The manufacturer must advise the distributor to in turn advise the cus-

tomers to have several months supply of film available if he's going into a self-service operation."

Commenting that sales promotion on the part of the manufacturer is designed to break down sales resistance for distributors and their salesmen in the field, Hill declared that "hiring salesmen is one of the toughest jobs for a distributor."

WHAT USUALLY HAPPENS

"What usually happens," he said, "is this. You find and hire a man that looks as if he'll be a good salesman, and you start him out by letting him read catalogs to get acquainted with the line."

"You intend to give him pointers and even to go out with him the first few days, but soon you've got a dozen phone calls and other problems more important to tie you up. It's the same thing the next day, so

you give the new salesman a price sheet and tell him to start out cold canvassing."

"At the end of eight weeks maybe he's sold one or two small jobs, but you're in the red, so you're forced to fire him, and then you start all over again."

"The manufacturer, I believe, can help distributors by training salesmen for them. We at Hill have worked up such a program, which has unfortunately been held up temporarily by the Korean situation. Under this plan the distributor hires the salesman himself, but we advise him how to do this."

"The distributor then pays for this man's board and lodging, except for the noon meal, which we furnish, while he goes through a five-week intensive training program at the factory."

"We had 12 instructors lined up for the course, but the plan was that by the fifth and final week the trainee would actually be doing most of the talking."

"The \$150 or \$200 that it would cost the distributor would be money well spent, we believe, for the salesman could then start out with knowledge and assurance."

Anheuser Busch Appoints Stella Mich. Sales Agent

DETROIT — Walter Schwab, district representative for Anheuser Busch, Inc., cabinet division, has announced the appointment of the F. D. Stella Products Co. here as sales agents for Michigan for the entire line of Anheuser Busch ice cream dispensing cabinets, ice cream and frozen food merchandising cabinets, etc.

Stella now has a stock of the new 1951 models of Anheuser Busch cabinets.

McLaury Adds New Store

BEAUMONT, Tex.—The McLaury Co. recently opened a new store and warehouse at 850 S. Fourth St. here to merchandise air conditioning and commercial refrigeration equipment.

The business is owned by W. R. McLaury, who also operates a refrigeration business at 890 Pearl St. C. A. Snooks is manager of the new business which is at the Fourth St. address.

Doubles Profits—Ends Spoilage!

"After I installed a new Frigidaire Vegetable Display Case, my sales and profits shot way up! My spoilage, which was pretty high, dropped to zero," says W. W. Carlson, owner of Carlson Food Market, Wichita, Kansas.

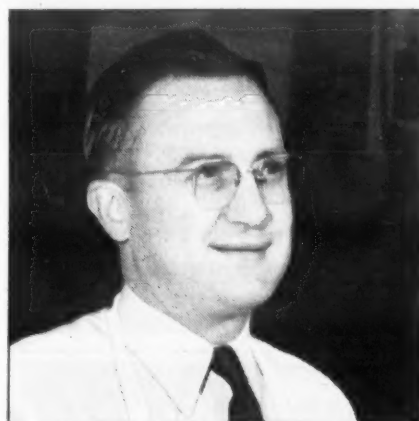
Saves \$100 a Month!

"The even temperature distribution in my new Frigidaire Reach-In Refrigerators has cut spoilage by 75%—which means a saving of \$100 a month for me," says Lewis V. Fuchs, owner of Roycroft Inn, East Aurora, N. Y.

Beats Competition on Costs!

"When a couple of my competitors told me their operating costs and I found mine considerably lower, I knew my investment in Frigidaire Compressors had paid off," says A. A. Bush, owner of the Ashtabula Poultry Freezing Plant, Ashtabula, Ohio.

Proof like this is
one big reason why...



Frigidaire Dealers have the industry's most powerful sales story!

Look at these enthusiastic reports from Frigidaire users! And remember, they're only three out of the hundreds that pour in from every kind of user everywhere in the nation! Think of the sales leverage that gives Frigidaire Dealers!

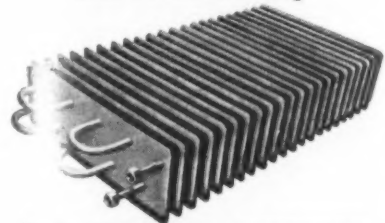
Whatever the prospect's location—whatever his business—his Frigidaire Dealer can actually prove to him how a similar user has profited from investing in Frigidaire equipment!

Right now this kind of proof is helping Frigidaire Dealers close more sales than ever before. And, with the aid of Frigidaire's intensive sales training and promotion programs, it's going to help them do even better in the future!

Actual proof of profit—it's the secret of the industry's most powerful sales story! And that sales story is one of the very important reasons why you can't match a Frigidaire Franchise.

You can't match a
**FRIGIDAIRE
FRANCHISE**

LOOK to LARKIN
for Durability



THE ORIGINAL, PATENTED CROSS-FIN COIL

refrigeration coil that changed the industry stands today unchallenged for performance, user satisfaction and lasting durability. Made from only the finest materials by skilled craftsmen under strict standards, every Larkin coil features imbedded fin-to-tube contact, swaged connection, staggered staggered construction, and staggered staggered. Write for complete details.

Manufacturers of the original Cross-Fin — Humi-Temp Units — Evaporative — Air Cooled Condensers — Air Conditioning Units and Coils — Direct Expansion Water Coolers — Steel Vacuum Coils — Heat Exchangers.

1000 OF THE NATION'S FOOD SUPPLY
LARKIN COILS
MEMORIAL DR., S.E. - ATLANTA, GA.

demand DETROIT CERTIFIED VALVES and CONTROLS



ONLY **DETROIT**
BRINGS YOU ALL 3

For One Convenient Source

Deal with Authorized
DETROIT Wholesalers!

DETROIT
LUBRICATOR COMPANY

5900 TRUMBULL AVE.
DETROIT 8, MICHIGAN
Division of AMERICAN RADIATOR &
Standard Sanitary Corporation
Canadian Representatives: RAILWAY
& ENGINEERING SPECIALTIES, LTD.—
Montreal, Toronto, Winnipeg

DETROIT HEATING AND REFRIGERATION
CONTROLS • ENGINE SAFETY CONTROLS •
FLOAT VALVES AND OIL BURNER EQUIP-
MENT • DETROIT EXPANSION VALVES AND
REFRIGERATION ACCESSORIES • STATION-
ARY AND LOCOMOTIVE LUBRICATORS

Serving home and industry AMERICAN-STANDARD • AMERICAN BLOWER • CHURCH SEATS
DETROIT LUBRICATOR • KEWANE BOILERS • ROSS HEATER • TONAWANDA INN

Askin Appointed Chief Engineer at Techniflex

PORT JERVIS, N. Y.—N. A. Gaboriault, president of Techniflex Corp., has announced the appointment of Joseph Askin as chief engineer.

Askin, a graduate of the University of Michigan College of Engineering, has a 28-year background in the field of electrical and refrigeration engineering.

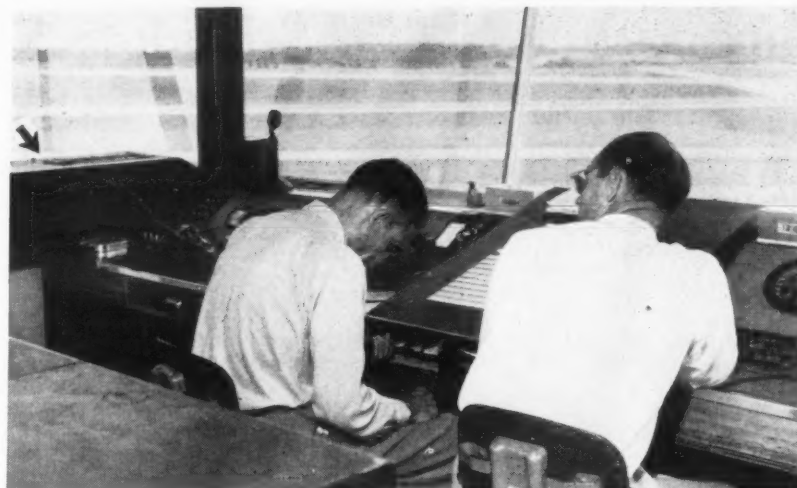
Chief engineer at Fedder's Mfg. Co. in Buffalo, N. Y., for 20 years, Askin worked experimentally on automotive and aircraft radiators, oil coolers, electric water coolers, electric refrigeration, air conditioning coils, beverage coolers, and expansion valves.

Later, he served as chief engineer of Peerless of America, Chicago, where he was concerned with the design and experimental testing of commercial refrigeration and air conditioning equipment. He was also chief engineer of the Electromatic Division of the Simoniz Corp. of America.

In addition to his work in the field, Askin has written professionally for leading electrical and refrigeration magazines. He is also the author of the 60-lesson course in air conditioning which was especially prepared for, and is now being taught, at the Utilities Engineering Institute, Chicago.

Furniture Store Air Conditions

SPARTANBURG, S. C.—Rhodes, Inc., local furniture store, has moved from 172 N. Church St. to its spacious new air conditioned home at 205 E. Main St.



WINDOW SILL LEVEL ducts (arrow) at Greater Cincinnati airport afford operators in control tower all-around view.



TRANSPARENT PLASTIC STACK (arrows) at Lunken airport runs to overhead ducts, still permitting operators unobstructed view.

2 Ways To Handle Airport Tower Ductwork

CINCINNATI—Directing the landing and take-off of hundreds of airplanes at a busy airport sometimes has the men in the control tower in a figurative "hot spot," but the control tower can also be literally a "hot spot" several months of the year.

Usually located on the roof of a hangar, a control tower must provide full vision on all sides so the operators can watch airplanes at any angle. This means that there must be glass on all sides. Such an exposure also means that the hot rays of the sun pour on and into the tower making it a pretty warm place to work.

Air conditioning is an obvious need, and a considerable amount of it is required, but installation of such equipment presents an interesting problem for the contractor: the equipment and ductwork must be so located that they won't obstruct the vision of the operators working in the control tower.

Two different ways of accomplishing this have been worked out by the Cincinnati Air Conditioning Co., Carrier distributor here, headed up by Wm. Hirsch and Art Radtke. The firm has conditioned the control towers at both the Lunken airport and the newer Greater Cincinnati airport. The latter is located some 15 miles from the heart of the city in Kentucky.

In both installations Carrier 50T6 5-ton package conditioners were employed, being connected to ductwork to provide proper distribution of the conditioned air. And in each case the conditioner was located within the conditioned space of the control room.

In the Lunken airport job, which was the first one, discharge ducts were run around the ceiling of the control tower, so there was the problem of connecting a discharge riser from the conditioner to the duct without interfering with the view of the operators.

The solution worked out was ingenious but simple, points out Ed. Williams, sales manager for the firm. A stack approximately 18 in. square was constructed out of clear plexiglas plastic. This was then mounted in sponge rubber on top of the air conditioner and connected to the duct above.

This is one air conditioning installation, at least, that the customer can literally "see through."

The problem in air conditioning the tower at the Greater Cincinnati airport was identical, but the solution was different. The somewhat different layout of the room permitted a different approach.

Instead of running a transparent stack from the conditioner to the ducts, the ductwork itself was run along the window sills and connected to the conditioner. The ducts were thus below eye-level and could not obstruct the view.

Discharge from these ducts is directed upward, while ducts at the Lunken airport installation are fitted with grilles discharging horizontally.

FOR
COOL
PROFITS

TIE UP WITH
TYPHOON

PACKAGED AIR CONDITIONERS
1½ TO 20 TONS

EVAPORATIVE CONDENSERS
3 TO 20 TONS

Over 40 Years of
Air Cooling Experience

TYPHOON Air Conditioning Co., Inc.
794 Union Street, Brooklyn, N. Y.

MORE SUPER MARKETS USE ★ MILLS for Cooling and Refrigeration Systems



1 Partial installation of 15 Mills Condensing Units, Pangle's Master Market.

2 View of typical modern "self-service" cabinets refrigerated by Mills Units.

3 Nine Mills Condensing Units in new Serve-All Super Market, Lincoln, Nebraska.

4 New Kroger Super Market, Dubuque, Iowa installed a total of 11 Mills Condensing Units.

• More and more modern markets have found increased sales appeal in refrigerated equipment, display cabinets, and air-conditioning. And for such operations Mills dependable Condensing Units have become increasingly popular.

Mills Units provide the finest in economical service and flexible adaptability. Capacities are available in a wide range of air-cooled, water-cooled, and combination air-water-cooled types. Write today for 60 page Catalog 204-1 illustrating the complete line.

MILLS
COMPRESSORS AND CONDENSING UNITS

MILLS INDUSTRIES, Incorporated
4100 Fullerton Avenue • Chicago 39, Illinois

EASIER TO
READ! COMPLETELY
REVAMPED WITH
NEW TYPE FACES

WHOLESALE
ONLY

Here's Your New Edition of
**HARRY ALTER'S
DEPENDABOOK No. 15**

Illustrates, Describes and Prices OVER 9,000
**REFRIGERATION
PARTS and Supplies**
* some items up to 60%
below regular prices

Write on your letterhead to
The HARRY ALTER Co
1728 South Michigan Avenue Chicago 16, Ill. 134 Lafayette Street New York 13, N.Y.

"Service Doesn't
Falter When It
Comes From
Harry Alter"

How To Avoid Legal Pitfalls In Advertising

Tell the **WHOLE** Truth, Manager of Boston BBB Advises Advertisers
In Citing 5 Lessons To Follow Based on Laws and Court Decisions

BOSTON—Legal pitfalls in advertising and sales promotion operations can be avoided by following five lessons based on federal and state laws and court decisions, according to Kenneth B. Backman, general manager of the Boston Better Business Bureau.

Addressing members of the International Association of Electrical Engineers during their 15th annual conference held here recently, Backman said these lessons are:

1. Advertising as a whole must create a misleading impression, although every statement separately considered is literally true.
2. Advertising must be written for the probable effect it produces on ordinary and trusting minds, as well as for those intellectually capable of penetrating analysis.
3. Advertising must not obscure or conceal material facts.
4. Advertising must not be artfully contrived to distract and divert readers' attention from the true nature of the terms and conditions of an offer.
5. Advertising must be free of fraudulent traps and stratagems which induce action which would not result from a forthright disclosure of the true nature of an offer.

Generally speaking, Backman said, "an advertiser who tells the truth, the whole truth, will avoid legal pitfalls. The phrase 'the whole truth' is of extreme importance.

"The mere fact that average intelligent and prudent persons would understand the true facts as intended by the advertiser is not a complete answer to the courts or such regulatory bodies as the Federal Trade Commission. They hold that the sub-average mind likewise must not be deceived, including the gullible and the stupid.

'PUFFING' AND PRETENSE

"Also, there is a rather fine line between what is 'puffing,' or mere exaggeration, and false representations. The United States Supreme Court has held that when an advertiser assigns to the article qualities which it does not possess, does not simply magnify in opinion the advantages which it has, but invents advantages and falsely asserts their existence, he engages in false representations and pretenses.

"There are many laws that relate to advertising and sales promotions. But those with which we are most familiar and upon which we rely most for their deterrent effect are the state advertising laws, the Federal Postal statutes, and the Federal Trade Commission Act.

"The advertising laws of most states have followed the *Printer's Ink* model statute which reads as follows:

"Any person, firm, corporation, or association who, with intent to sell or in any wise dispose of merchandise, securities, service, or anything offered by such person, firm, corporation, or association, directly or indirectly, to the public for sale or distribution, or with intent to increase the consumption thereof, or to induce the public in any manner to enter into any obligation relating thereto, or to acquire title thereto, or an interest therein, makes, publishes, disseminates, circulates, or places before the public, or causes, directly or indirectly, to be made, published, disseminated, circulated, or placed before the public, in this State, in a newspaper or other publication, or in the form of a book, notice, handbill, poster, bill, circular, pamphlet, or letter, or in any other way an advertisement of any sort regarding merchandise, securities, service, or anything so offered to the public which advertisement contains any assertion, representation, or statement of fact which is untrue, deceptive, or misleading, shall be guilty of a misdemeanor."

In some states, this law has been modified, and in the case of Massachusetts, the modification is to the effect that the untrue, deceptive, or misleading advertising must be one which the advertiser knew or might, upon reasonable investigation, have ascertained to be untrue, deceptive, or misleading.

It is important to know that the advertiser does not require proof of intent. The simple fact that the advertisement contained any assertion, representation, or statement of fact

which was untrue, deceptive, or misleading has been sufficient to obtain many convictions. The courts have assumed that the responsibility was on the advertiser to know of or have proof of the accuracy of his statements.

"The federal statute covering mail frauds provides that 'whoever, having devised or intending to devise any scheme or artifice of defraud, or for obtaining money or property by means of false and fraudulent pretenses, representations, or promises' uses the Post Office establishment of the United States for the purpose of executing said scheme, or attempting to do so, shall be punished.

"The statute includes more than mere fraud in the narrow, technical sense. It includes false pretenses, false representations, and false promises.

"Furthermore, the statute does not stop at actual fraud. It strikes at a mere scheme to defraud. It is not necessary that there be a dollar lost. Nor does the act require that the letter or circular mailed must of necessity contain false or fraudulent statements. It is only essential that the mails be used in connection with the scheme.

"The Post Office department has additional control over the use of the mails in connection with the issuance of fraud orders. By such order the postmaster is directed to stamp as fraudulent and return to senders all mail received at the Post Office addressed to the parties named therein, thus cutting off all remittances and automatically putting the promoter out of business."

Turning to the Federal Trade Commission Act, Backman recalled that on March 21, 1938, Congress amended the act for the first time since its adoption in 1914.

"The principal effect of these amendments, known as the Wheeler-Lea amendments, has been to give the commission a broader jurisdiction over advertising," he stated.

"Most of the Wheeler-Lea amendments apply only to the advertising of foods, drugs, devices, and cosmetics. However, the commission's general powers were enlarged in two particulars.

PURPOSE OF AMENDMENT

"By the first of the 'general' amendments, the Federal Trade Commission Act declares unlawful not only 'unfair methods of competition' but also 'unfair or deceptive acts and practices in commerce.' This provision is applicable to all commodities.

"The purpose of the additional language was to make it no longer necessary for FTC to offer evidence establishing injury to an actual or potential competitor. The commission is required to establish no more than that advertising representations have the capacity to mislead the public....

"If an advertiser wishes to dispute an order of the commission, the second of the 'general' amendments places upon the advertiser the burden of seeking relief from the courts.

"Under amendments to Section 5, also applicable to all commodities, cease and desist orders of the commission in Federal Trade Commission Act cases become final after 60 days, unless within that time respondents have applied to the appropriate United States Court of Appeals for review.

"For each subsequent violation a civil penalty of not more than \$5,000 becomes recoverable in a civil action brought by the United States. The imposition of such civil penalty is an additional remedy to that formerly employed of invoking the inherent power of the courts to punish for contempt anyone who violated a court order directing compliance with an order of the commission.

"Actions for civil penalties are instituted by the Attorney General of the United States. Such civil penalty suits have been brought against many respondents alleged to have violated FTC 'final' orders and the courts have entered judgments which, in some cases, amounted to several thousands of dollars.

"Actually, FTC issues formal complaints in a minority of cases only. The majority of cases are settled by stipulation.... A stipulation is an admission of guilt, a fact to be pondered by advertisers before signing."

Backman then took up lotteries: "Both the Federal Trade Commission and the Post Office department take action against lotteries and, in many states, there are effective state laws covering this subject.

LOTTERY DEFINED

"A lottery is any scheme for the disposal or distribution of money, property, or anything of value by chance among persons who have given or agreed to give any consideration for the chance of obtaining such property. There are three essential elements to a lottery: Prize, chance, and consideration.

"Prize: The prize may be cash, merchandise, or anything of value given to the winner.

"Chance: Chance has been defined as the absence of any means of calculating or controlling results by the participants.

"Consideration: Consideration is the money or anything of worth which is expended by the participant for the entry, regardless of whether or not face value is given in exchange.

"Consideration' does not necessarily mean expenditure of money for the purchase of a ticket or merchandise, etc. The mere requirement for a person to visit a store, for example, may be sufficient to constitute consideration.

"Usually it is fairly simple to

prove the existence of prize and chance in a scheme, but the question of when there is consideration is not so easily determined.

"For example, in a scheme where the public did not have to go to the store when the drawing was held, it has been decided that the scheme was not a lottery, but when the customer had to be present in the store at the time of the drawing, it was maintained that the scheme was a lottery."

Continuing, Backman noted that "the Supreme Court views on misleading advertising represent the law of the land on this subject and were most recently explained in affirming a postal fraud order against *Facts* magazine on March 8, 1950. This was in connection with a 'puzzle contest.'

"The decision disagreed sharply with the view of the District Court in the same case, which would require the public to make intensive and concentrative reading of the entire text of advertising. The Supreme Court stated:

"Advertisements as a whole may be completely misleading although every sentence separately considered is literally true. This may be because things are omitted that should be said, or because advertisements are composed or purposefully printed in such a way as to mislead....

"That exceptionally acute and sophisticated readers might have been able by penetrating analysis to have deciphered the true nature of the contest's terms is not sufficient to bar findings of fraud by a fact-finding tribunal. Questions of fraud may be determined in the light of the effect advertisements would most probably produce on ordinary minds....

"People have a right to assume

that fraudulent advertising traps will not be laid to ensnare them. Laws are made to protect the trusting as well as the suspicious."

CAN'T DECEIVE UNTRAINED

"The above decision has not deviated from previous decisions of the United States Supreme Court which had previously stated:

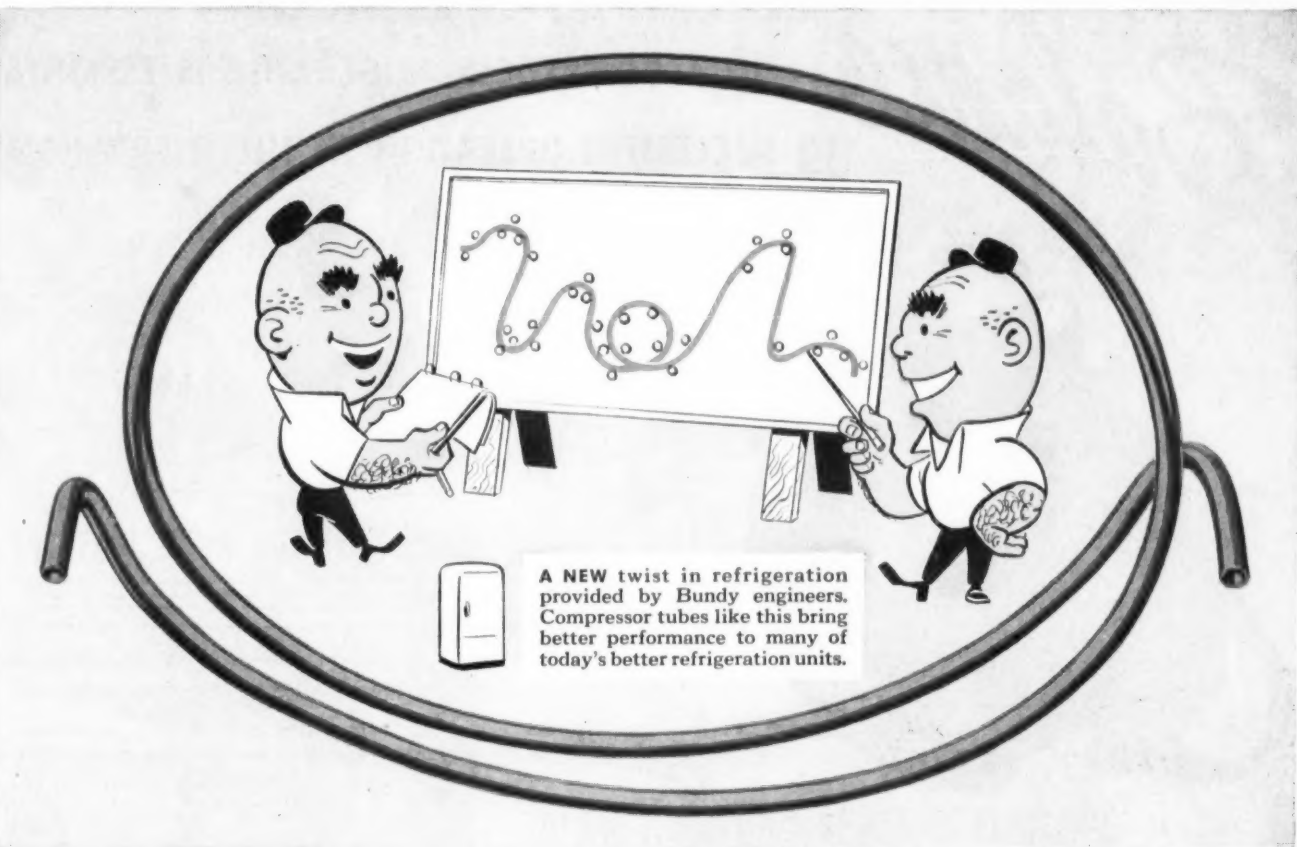
"The fact that a false statement may be obviously false to those who are trained and experienced does not change its character, nor take away its power to deceive others less experienced.

"There is no duty resting upon a citizen to suspect the honesty of those with whom he transacts business. Laws are made to protect the trusting as well as the suspicious. The best element of business has long since decided that honesty should govern competitive enterprises, and that the rule of *caveat emptor* should not be relied upon to reward fraud and deception."

"Obviously," Backman concluded, "an advertiser cannot tell everything about his product. Few people are interested in detailed specifications, for example. But he can tell the whole truth about its performance, etc., and should do so, if by failing to do so, he would deceive the reader."

At the beginning of his talk, Backman referred his listeners to two "highly authoritative" sources: "Do's and Don'ts In Advertising Copy," a publication of the National Better Business Bureau, and "A Guide for Retail Advertising & Selling," published by the Association of Better Business Bureaus.

He said they contain recommendations on air conditioning, electrical appliances, and refrigeration.



Better bending is Bundy's business, too!

What a package Bundy has for refrigeration men!

Bundyweld not only offers more positive features than any other tubing, but Bundy is ready to put unmatched skill against the solution of your tubing fabrication problem as well!

In fact, the tougher the bend, the better we like it. For better bending is part of Bundy's business. Developing new fixtures is an old story with us... our engineers have done it many times in licking the most ticklish bending jobs. And the resulting savings have been mighty gratifying to our clients.

Now take a good look at the Bundyweld features that go with the job. Bundyweld is double-walled from a single strip, brazed through 360° of wall contact. Stronger walled, yet thinner walled... faster-cooling, thoroughly leakproof under pressure from within or without. It's ductile, too, readily bent to meet your needs.

Get the complete story; see how Bundyweld Tubing and Bundy's special bending services are made-to-order for you. Contact a distributor, or write: **Bundy Tubing Company, Detroit 14, Michigan.**

Bundyweld Tubing

DOUBLE-WALLED FROM A SINGLE STRIP

WHY BUNDYWELD IS BETTER TUBING



Bundyweld starts as a single strip of basic metal, coated with a bonding metal. Then it's...



continuously rolled twice around laterally into a tube of uniform thickness, and



passed through a furnace. Bonding metal fuses with basic metal, presto—



Bundyweld... double-walled and brazed through 360° of wall contact.



NOTE the exclusive patented Bundyweld beveled edge, which affords a smoother joint, absence of bead and less chance for any leakage.

SIZES UP TO 1/2" O.D.

Bundy Tubing Distributors and Representatives: Cambridge 42, Mass.: Austin-Hastings Co., Inc., 226 Binney St. • Chattanooga 2, Tenn.: Peirson-Deakins Co., 823-824 Chattanooga Bank Bldg. • Chicago 32, Ill.: Lapham-Hickey Co., 3333 W. 47th Place • Elizabeth, New Jersey: A. B. Murray Co., Inc., Post Office Box 476 • Philadelphia 3, Penn.: Rutan & Co., 404 Architects Bldg. • San Francisco 10, Calif.: Pacific Metals Co., Ltd., 3100 19th St. • Seattle 4, Wash.: Eagle Metals Co., 3628 E. Marginal Way • Toronto 5, Ontario, Canada: Alloy Metal Sales, Ltd., 881 Bay St. • Bundyweld nickel and Monel tubing is sold by distributors of nickel and nickel alloys in principal cities.

ASK FOR



MORE DRYER FOR YOUR MONEY

*Only Six Models
fit Everywhere*

**AGAIN IN '50
KEROTEST HAS THE PRODUCTS**

At your KEROTEST Wholesaler

KEROTEST MANUFACTURING COMPANY
PITTSBURGH 22, PENNSYLVANIA

OFFICES AND WAREHOUSES: New York City Chicago Los Angeles San Francisco
Houston Dallas Tulsa Odessa, Texas Richmond Atlanta Toledo
St. Louis Charleston, W. Va.

INSIDE DOPE

by GEORGE F. TAUBENECK

(Concluded from Page 1, Column 1)
wide research organizations—Gallup, Roper, and all others—were so wrong that it was pitiful.

In contrast, one man, who did his own interviewing, was right.

That man was Leslie Biffle, who was then Secretary of the Senate.

Loyal friend of President Truman, he couldn't believe that the big research organizations had the right dope. The latter predicted flatly that Truman didn't have a chance for the Democratic Party nomination, let alone another term as President.

Biffle resolved to find out for himself.

He was smart enough to know that when people are questioned formally by strangers they don't always respond from their hearts. Rather, they reply cautiously, or tell the interrogator what they think he or she wants to hear. And that's the fundamental fallacy of "sampling" techniques based on interviews. Here's an extreme example of that sort of thing:

The sole owner of a small manufacturing plant called all his employees into his office, one at a time, and asked them how they were going to vote in the aforementioned election. Spying the huge Dewey button on his lapel, 93% mumbled that they were Republicans, or against Truman. So, he told all his friends, Dewey was a shoo-in, because "labor

is solidly behind him."

Wonder why he lost his thousand-dollar bet?

Any good salesman knows that there are two reasons why a customer buys an expensive product: the one he admits, and the real reason. The reason mentioned might be convenience, or economy. The real reason could be keeping up with the Joneses, or getting The Little Woman off his neck for spending so much time fishing or golfing.

The Real Reasons

Back to our story: Biffle bought a nondescript second-hand car and set out to tour the nation. He wanted to get the "low down" himself on Truman's chances.

Like kings of olden times, he traveled "incognito." That is, he never gave his right name, never revealed that he was a Big Shot, and tried to talk and act and dress like the people in every community he visited. In Connecticut 'twas hinted that he was a father of 12 children and "on relief." In New York, apparently he was a union organizer, and in Pennsylvania a coal miner, according to reports never denied officially.

He pretended that he was selling insurance in Ohio, Michigan, Indiana, and Illinois (so the story goes) and in the rugged western states he posed as a cattle buyer. Wearing overalls here and a pin-striped blue suit there, he changed quickly to levis and a 10-gallon hat two days and 500 miles later.

While the impersonal and sometimes disdainful pollsters asked stilted questions—and got wrong answers—modest, chameleonlike Biffle listened. He looked and acted like "one of the gang," and was accepted at face value. Biffle got the real reasons why people were going to vote one way or another.

What he heard not only encouraged the simple, uncomplicated Harry Truman (whose failure as a haberdasher may have been the most costly bankruptcy in United States history) but guided him to a confounding victory. Truman capitalized on this personal research of Biffle's, and went on to prove devout believers in professional research to be suckers.

Leslie Biffle discovered that the American people had grown tired of Big Shots, and distrusted any dignified character who acted like one. The Depression had shattered their confidence in Big Shot Businessmen. And revelation of the Yalta secret pact—engineered by Alger Hiss through an ailing F. D. R.—damaged their faith in Big Shot politicians. There was a suspicion that politicians lost the war after common people had won it, and that the stage for World War III was all set. And if their hero, F. D. R., could make colossal mistakes, to whom could they turn?

They were in no mood to trust The Brass any longer, Biffle learned, so he advised Harry to be human, folksy, simple, and humble. That strategy paid off hugely. Dewey was a New York "slicker," the man with a mustache, the fellow who was too busy with Large Affairs to take off the gloves and shake hands. Truman was a "little fellow," trying to do the best he could.

You know who won. Someone has said that this isn't The Age of the Common Man so

much as it is an age when mankind is acting awfully common. If that be true, we'd better readjust our methods.

Let's re-examine our use of stereotyped slogans which no longer have meaning to millions. Let's quit using testimonials from Men of Distinction. Let's stop picturing our products in homes of the rich. The most astounding advertising successes of our day—Toni home permanents and Hada-col patent medicine—don't. Their advertisements feature plain Joes and Janes.

Perhaps a royal crest ("by appointment to H. M. the King") may sell goods in England, but it's no shucks over here. Inherited wealth and social position are vanishing in the United States, and so is the "carriage trade." To replace it we have a much bigger market: millions upon millions of Joes and Janes who have more money now than they ever saw before or possibly expected to see.

In summation, let's abandon the mansions, and knock on cottage doors.

Get Acquainted with Your Audience

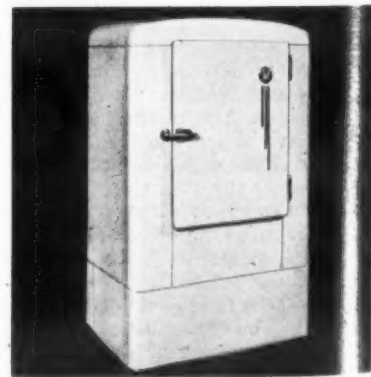
"Writing down" to presumed morons is snobbish and unrealistic. If we'd bother to get acquainted with the latter, we might get a jolt. Few of them are morons, and many of them have more leisure to think than the leaders and publicists who try to sway them.

The world isn't divided between executives and intellectuals on the one hand, and ditch-diggers and assembly-liners on the other. The voters who swing elections are neither. They're teachers, preachers, white-collar family men, storekeepers, and housewives. Their mental capacities may be excellent, but their opportunities limited. By nature, they may not be particularly ambitious and, they enjoy their quiet modest living. They're thoughtful and eager to learn. Never underestimate their intelligence (or overestimate their knowledge).

The story of Biffle and his personal research should be a lesson to all manufacturing, advertising, and sales executives. That lesson is:

Statistics aren't people, and professional surveys can fool you. It's easy to hire professional researchers. You're a busy man, Mr. Executive, and they're supposed to be experts. But the easy way is the wrong way if you don't check their findings yourself. Travel incognito once-in-awhile. Meet your customers. Listen to them. Draw them out. Argue, if you feel like it, but confine your arguments to questioning their facts and logic, and the modest presentation of yours. Above all, don't arouse suspicions by identifying or labelling yourself or your connections. Look, talk, act, and dress like they do. Funny thing is, you'll learn to enjoy these extra-curricular activities. And you'll make plenty of stimulating new friends. It will be a welcome change from your home-office-club routine, fully as refreshing as a hunting or fishing trip where you can wear old clothes and be yourself.

Count these BENBAR features! They add up to MORE SALES!

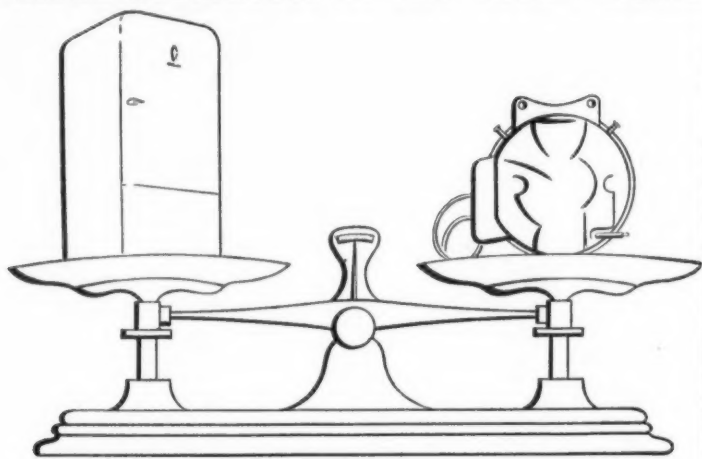


- Hermetically sealed condensing unit
- Panelyte covered door jambs—Frost locking lock
- Trouble free capillary system
- Two step door construction
- 4" fiberglass insulation

Sell the kind of freezer that all America is demanding. 2 standard sizes—14 and 17 cu. ft.
DISTRIBUTORSHIPS NOW AVAILABLE
Write for full information regarding opportunities.

**AUGUST G. BARKO
MANUFACTURING CO.**
2230 S. 43rd St., Milwaukee 15, Wis.

Balance IN A DOMESTIC REFRIGERATOR IS ESSENTIAL TO SUCCESSFUL OPERATION IN THE USER'S HOME



Balance ... of the hermetic unit capacity to the refrigerating system and cabinet are of prime importance.
Balance ... of the reciprocating and motive mechanism is necessary to quiet operation and freedom from vibration.

... but these two major elements of performance require a great deal of careful engineering in proper application of the compressor assembly to the evaporator and cabinet. Maximum refrigeration with minimum power and cost is the prime objective. Thus, one designer may achieve the same operating efficiency with a small unit that requires a larger unit in another similar product. Again careful balance is the answer.

1. Balance of the cabinet heat leak to the unit capacity by attention to: Proper insulation • Vapor barriers • Cabinet sealing • Tight construction and Good door seals.
2. Balance of the evaporator to the unit capacity by proper design for temperature and cooling. Size • Shape • Surface • Position • Baffling and Mounting.
3. Balance in the evaporator refrigerant passages to obtain • Correct refrigerant flow • Minimum refrigerant charge.

4. Balance in air flow over the motor compressor to • Maintain low shell temperature • Minimum motor winding temperature • Low oil temperature.
5. Balance of condenser to the compressor to obtain • Low operating head pressures • Adequate air flow • Minimum space.
6. Balance of the capillary tube to unit capacity to obtain • Proper restriction • Correct refrigerant flow.

The success in balancing the entire system, in a large degree, measures the customer satisfaction and appeal of the final product.

Tecumseh Products Company are in the best position of any manufacturer in the industry to give you the correct hermetic compressor for your application.

All of these combinations of bore, stroke and refrigerant give an unequalled versatility of displacement and capacity. There is a Tecumseh Hermetic to fit your application.

And—equally important—our engineering laboratories have the "know how" to help you in proper balance of the unit to your evaporator and cabinet.

Write or wire today for complete information about these Tecumseh Hermetics.



The 1/9 H.P. Tecumseh compact compressor—for limited space application, but maximum performance and efficiency.



The internally spring mounted single cylinder compressor, supplied in all sizes from 1/8 to 1/3 H.P. in four bores and three strokes for either F-12 or F-22 refrigerant.



The Tecumseh twin, supplied in all sizes from 1/4 to 3/4 H.P. in four bores and three strokes for either F-12 or F-22 refrigerant.



TECUMSEH PRODUCTS COMPANY
TECUMSEH, MICHIGAN

EXPORT DEPARTMENT: 2111 WOODWARD AVE., DETROIT 1, MICH.

World's largest independent producer of compressors and condensing units for the refrigeration industry.

WHEN YOUR JOB CALLS FOR TIME SWITCHES SPECIFY Paragon

700 Series

Set an entire week's program in advance with this 7-day Calendar-Dial Time Switch. Provides individual settings for each day of week. Ideal for control of automatic Heating, Ventilating and Air Conditioning Equipment in public buildings, schools, churches, factories, etc. SPDT, DPST, and DPDT Models.

See your jobber... or write for catalog.



FROM
\$3250
LIST

Paragon ELECTRIC COMPANY
1687 12th St. • TWO RIVERS, WIS.
America's Largest Exclusive Manufacturer of Time Control Switches for all uses

Calif. Firm Formed by Kunkle, Leatherman To Rebuild Norge Systems

SAN LEANDRO, Calif. — Nord Hermetic Co. will go into operation at 1701 San Leandro Blvd. in San Leandro on or about Dec. 1, specializing in the re-operation of Norge sealed refrigeration systems.

Paul Kunkle and Gordon Leatherman, both of whom were formerly connected with the Norge refrigeration plant in Muskegon, Mich., are the principals in this new setup. Kunkle was more recently associated with his brother, George Kunkle, in the Modern Refrigeration Co. operation in Detroit, which also specializes in re-operation of Norge systems. However, there will be no connection between that company and Nord.

The San Leandro firm has been established with the end in view of serving dealers and refrigeration service firms in the 11 western states.

The building offers a floor area of 100 by 40 ft. (or 4,000 sq. ft.) with room for expansion. Shop facilities for processing and dehydrating the hermetic compressors and evaporators will be such that the operation will be handled on the same basis as a factory setup, but on a smaller scale.

Systems will be torn down and inspected, worn and inoperative parts replaced, and the system will then be re-assembled and re-processed.

Units forwarded by dealers or refrigeration service firms will be handled either on an exchange or a repair and return basis, depending on the wishes of the customer.

Kunkle at one time traveled the region comprising the 11 western states for the Norge organization as a regional service representative and is well acquainted with the trade and problems of the territory.

Official To Seek Deadline Extension for Neb. Firms Needing Milk Equipment

OMAHA, Neb.—Milk producers in the Omaha milk-shed will have an additional three months in which to purchase milk coolers and other equipment to qualify for Grade A production, according to Dr. Edwin Lyman, City-Council Health Department director, who stated that he will recommend to the Board of Health that the effective date of the proposed Grade A ordinance be made April 1 instead of January 1 as previously considered.

The conversion to an all-Grade A milk market by area dairy farmers has been delayed by the war and the cement shortage, Dr. Lyman commented.

John Kolb, manager of the Nebraska-Iowa Milk Producers Association, expressed the opinion that enough Grade A milk would be produced within this area by April to allow the changeover without undue hardship on producers.

DEALER STATEMENTS: Here's What Distributors Need To Know About Them

NEW YORK CITY—Some points that distributors should watch in evaluating the financial statements of appliance dealers were pointed out here recently by Samuel W. Lerer, head of the accounting firm bearing his name and accountant for the New York Electrical, Radio, and Allied Industries Credit Group.

Lerer warned distributors against taking these statements at face value without checking the date the statement was made and with the retailer's banker.

He said the statement should contain a reserve for future servicing, for if one is not maintained, the dealer is liable to get into serious

financial trouble.

The statement should also list deposits on goods not yet delivered as liabilities and not assets. This is not always done by dealers, he noted.

A differentiation should be made between "free" inventories and goods obtained on floor plan. Floor plan goods are often backed by banks which have a prior lien on them, he explained.

Lerer addressed his remarks to the Northeast Credit Conference sponsored by the New York Credit and Financial Management Association. Another speaker, Benjamin Weintraub of Levin Weintraub, counsel for a local electrical credit group,

discussed debtor extension agreements.

Weintraub declared that it is no trick to put a debtor out of business, but it was a good trick to maintain his account and still get 100 cents on the dollar.

He explained that this has been accomplished here by having key creditors agree not to bring court action against the debtor if the debtor will permit their accountant to take over his books.

Then the debtor is given a certain period of time to settle his debts and is helped along toward this end by special merchandise deals from the creditors.

Profits Rise When Cleaner Shows Customers How Refrigeration Guards Furs

DENVER—Taking customers on inspection "tours" of its refrigerated fur-storage vault and playing up the protection provided by refrigeration has helped to increase profits considerably for New Method Cleaners & Dyers here.

The firm, operated by A. J. Ornstein, has installed a 2½-hp. Frigidaire compressor which supplies three wall-type coil units in a space of 30 ft. by 20 ft. The circulators are mounted on the wall 5 ft. above the floor. Broad aisles permit good circulation of cold air at 3,300 c.f.m.

One of the units is located in a partitioned-off section at the rear of the vault where particularly delicate furs and materials are stored. The heavy door to the section is similar to those used in meat coolers.

The unit in this space can be operated separately, if desired. A thermostat is adjustable for a temperature as low as 35°.

The compressor is mounted in an enclosed wall space adjacent to the vault door, so that it can be serviced without entering the storage room.

Coolerator's 12-Mo. Sales 70% over Year-Ago Level

DULUTH, Minn.—Coolerator sales in the fiscal year ended Sept. 30 were more than 70% ahead of last year and production in the six months prior to Oct. 1 set a period record, according to Ward R. Schafer, vice president and general manager.

Addressing the company's third annual sales policy conference, Schafer said present sales and production schedules were set up to effect a similar increase in 1951.

Although the national defense program is beginning to affect the supply of some basic materials, the company "is optimistic that Coolerator will continue to receive its share of materials," he declared.

During the conference, it was announced that the 1951 electric range line will be introduced to distributors at a series of meetings.

Baltimore Aircoil Names Agents In Midwest, South

BALTIMORE—Baltimore Aircoil Co., Inc., manufacturer of evaporative condensers and cooling towers, announced recently the appointment of four new representatives in midwestern and southwestern areas.

Emanuel Feinberg & Associates, in Detroit was given the southeastern Michigan and metropolitan Toledo territory.

Zintel, Byfield, & Co., Inc., of Chicago has been assigned the northern Illinois and northern Indiana territory.

Nick Ruge Sales of Lowell, Ind. handles the central Indiana territory.

Marshall, Neil and Pauley, Inc., of Houston, covers Texas excepting the Amarillo and Lubbock areas.

Demand for Cooling Jobs Continues In Carolinas

CHARLOTTE, N. C.—The continued demand for installations of air conditioning systems in the Piedmont Carolinas is keeping the engineering and construction crews of Page Air Conditioning Co. here busy, Jesse W. Page, Jr., president, stated recently.

"Usually by October, air conditioning demand has tapered down to just a few jobs," Page said. "But this year, many air conditioning buyers have reached the conclusion that this is the most advantageous time of the year to air condition their establishments."

"It is now taking about 60 days for us to take an order and complete an installation of a Worthington air conditioner."

2 Firms Named To Handle Servel Air Conditioners

EVANSVILLE, Ind.—Servel, Inc., manufacturer of gas equipment and appliances, has announced the appointments of two new distributors of its "All-Year" air conditioners for homes as well as business establishments.

The firms named are the Behler-Young Co., of Grand Rapids, Mich., and the Demmler Brothers Co., Pittsburgh.

The Michigan firm has been in business for 23 years, and distributes heating equipment, filters, grilles, and registers, and manufactures ducts and fittings. Behler-Young will distribute the Servel air conditioner in western Michigan.

Demmler Brothers, serving the trade continuously since 1861, distributes heating equipment, sheet metal, roofing materials, and supplies for sheet metal contractors. The company serves approximately 1,000 accounts in western Pennsylvania, northern West Virginia, and eastern Ohio.

Contract Let for Cooling Installation at Memphis

MEMPHIS, Tenn.—Contracts have been awarded for a five-story addition to the Union Planters National Bank & Trust Co., to cost in excess of \$900,000, according to Emmett J. House, vice president of the institution.

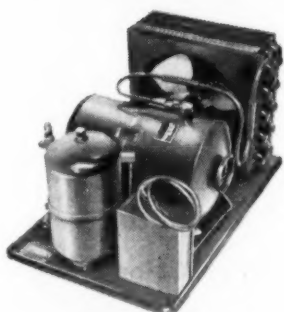
House said the air conditioning, heating, and ventilating contracts were let to H. W. Lancaster & Sons.

OVER THE COUNTER SERVICE!

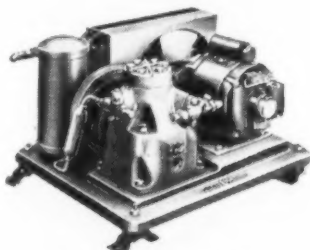


Condensing Units and Renewal Parts

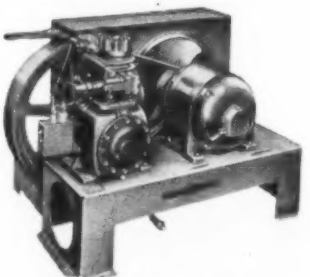
INCREASE YOUR BUSINESS
with these
3 great lines



TYPE CSS Sealed Units
1/6 to 1/2 HP



TYPE CW Open Units
1/4 to 2 HP



TYPE CM Open Units
2 to 10 HP

G-E compressor bodies available
in sizes from 1/6 to 10 HP.

MORE THAN 75 SUPPLY LOCATIONS!

Leading refrigeration supply jobbers at over 75 locations throughout the U. S. are authorized wholesalers of G-E Condensing Units and Renewal Parts. Your nearest G-E authorized wholesaler stands ready to handle all your on-the-spot requirements—giving you the fast, efficient "over the counter" service you require.

OVER 1,000,000 GENERAL ELECTRIC CONDENSING UNITS IN OPERATION TO DATE!

There are many G-E Condensing Units in constant use right in your community. Now that you can get genuine G-E replacement parts so easily, why not take advantage of this profitable opportunity to serve your customers?

SELL COMPLETE G-E CONDENSING UNITS TOO!

Many of your customers will greatly benefit by installing efficient, new G-E Condensing Units to modernize and expand their refrigeration facilities. You can build worthwhile business by taking care of these needs.

mail this coupon today!

General Electric Company, Section AC 13,
Air Conditioning Department, Bloomfield, N. J.

Please send me the following literature:

☐ Hermetics Specifications Sheet PM50-0311

☐ Condensed Catalog—Open Type Units SP-51-1206A

☐ Renewal Parts Catalog SP-40-1164B

I am a service engineer ☐ dealer ☐
manufacturer ☐ contractor ☐

NAME.....

COMPANY.....

ADDRESS.....

CITY.....ZONE.....STATE.....

FREE!
Data on
G-E sealed and
open units

GENERAL ELECTRIC

AIR COOLED FAUCET STANDARDS

maintain proper temperature
right to the glass!

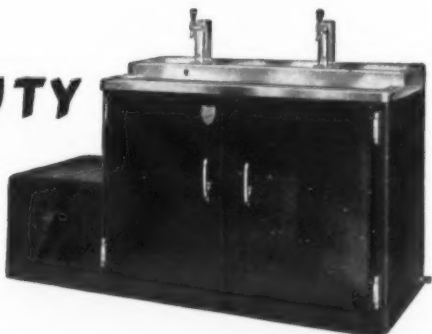


BLACK BEAUTY

DIRECT DRAW

by

PERLICK



Customer-Proved For Over 10 Years

Cooled Faucet Standards mean a perfect glass of beer any time—with a minimum of moving parts and maintenance. Air Cooled Faucet Standards are an exclusive Perlick feature, which makes Perlick dispensers easier and more profitable to sell. Sell Perlick's line for larger profits!

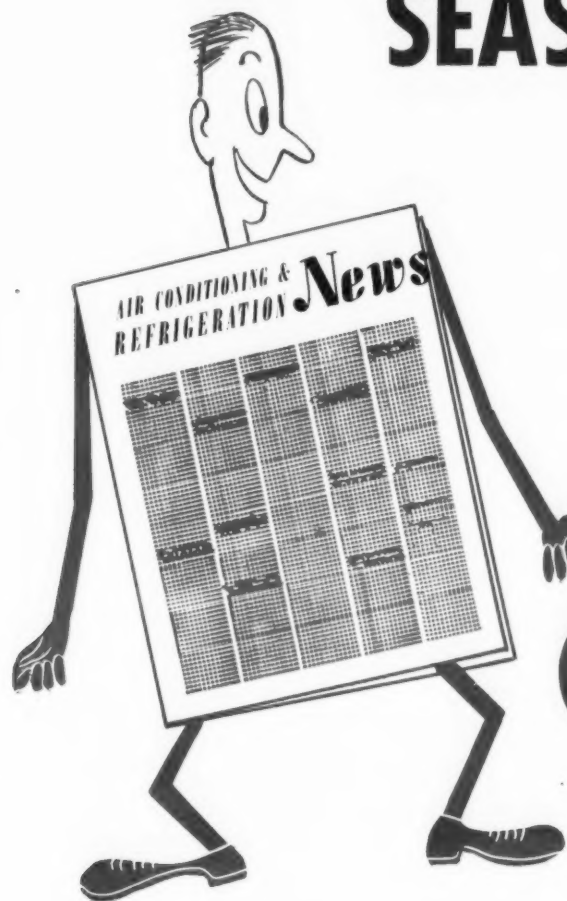
ONLY

A Direct Draw
Dispenser with Air
Cooled Faucet
Standards can deliver a perfect glass of beer every time!

Perlick
BRASS CO.
Milwaukee 10, Wis.



We're Starting Off The 1951 AIR CONDITIONING SEASON With The **BANG IT**



DESERVES!

\$1,000.00 IN PRIZES!

FOR Your MOST UNUSUAL AIR CONDITIONING INSTALLATION

Here's Your Chance to Make a Real Contribution to the Air Conditioning Industry—and *Get Paid for Doing it!* Every air conditioning dealer and contractor has at one time or another installed a job that appealed to him as an odd or unusual way to use air conditioning. **ALL YOU HAVE TO DO IS TELL US ABOUT YOUR "PET" INSTALLATION. THAT'S WHAT THIS CONTEST IS ALL ABOUT.**

Maybe your favorite job was installed in a factory . . . a special production problem. Maybe

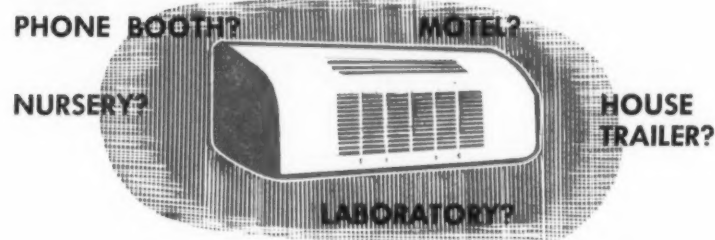
it was in a greenhouse to assist the growth of a rare flower or vegetable. House trailer? Tobacco barn?

You must have the records on some such installation in your filing case or in the back of your mind. Drag out the details and make them win a prize for you.

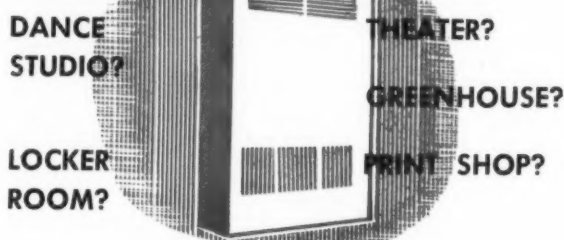
It's easy to enter and you have a good chance to win. All you have to do is follow three simple rules to qualify for 75 valuable prizes. You can submit as many entries as you want . . . so let's go!

THREE CONTEST DIVISIONS—You Can Enter ALL THREE

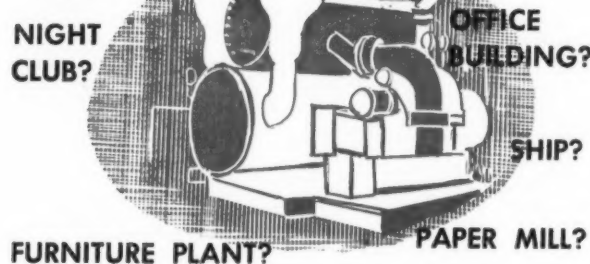
1 ROOM COOLER (2 H.P. AND BELOW)



2 PACKAGE UNIT



3 CENTRAL STATION



Who Can Enter?

This competition is open to all bona fide air conditioning dealers or contractors and their employees—whether salesman, installation man, or bookkeeper. Only requirement is that the entrant have participated in some way in the installation submitted.

One person can submit as many entries as desired in any one or all three categories.

FOLLOW THESE SIMPLE RULES

1. Submit a picture of the installation to illustrate its unusual aspects.
2. Write up a brief—but complete—description of the installation including the following information:
 - a. Customer's name and address.
 - b. Type and name of air conditioning equipment used.
 - c. What job is the equipment intended to do on this installation?
 - d. In what way is the application unusual?
 - e. What installation problems, if any, were involved?
 - f. How was the sale made?
3. Mail the picture and description to CONTEST EDITOR, AIR CONDITIONING & REFRIGERATION NEWS, 450 W. Fort St., Detroit 26, Mich. for arrival Jan. 10, 1951. No entries received later than midnight, Jan. 10 will be considered.

Entries will be judged on the basis of the unusual nature of the application. When a decision is close, the judges will then consider the completeness of the description in making the awards.

All entries become the property of AIR CONDITIONING & REFRIGERATION NEWS.

HOW CONTEST WILL BE JUDGED

A panel of competent judges either in or associated with the air conditioning industry are now being selected to decide the winners of this competition.

Why This Contest?

AIR CONDITIONING & REFRIGERATION NEWS believes that what may be considered a unique application of air conditioning today could open up a whole new vista of sales and profit possibilities for the entire industry tomorrow! We also believe that it is to the industry's advantage to know about such installations *right now*.

As its contribution to the advancement of the air conditioning industry, AIR CONDITIONING & REFRIGERATION NEWS plans to give the widest possible publicity to the information submitted in this contest.

The success of the contest depends on the full participation of the industry's field forces . . . the men who are out selling and installing room coolers, package units, and central station systems. That means you!

NOT MUCH TIME! Contest Closes

JANUARY 10, 1951 Start digging up the case histories of your pet installations today and send in your entries right away!

Winners Will Be Announced In the January 22

Issue of AIR CONDITIONING & REFRIGERATION NEWS

HERE ARE THE PRIZES

PRIZE	DIVISION Room Cooler	Packaged Unit	Central System
First	\$100	\$100	\$100
Second	50	50	50
Third	25	25	25
Next 10	10	10	10

Next 12 best entries in each division will be awarded a copy of George F. Taubeneck's newest "laugh while you learn" selling book, "Both Feet on the Ground."

SEND IN THIS COUPON (OR A FACSIMILE) WITH YOUR ENTRY

Here is my entry in the unusual air conditioning application contest.

Picture is: attached ☐ sent under separate cover ☐

Please enter me in the following division:

Room cooler ☐ packaged unit ☐ central system ☐
(As many separate entries may be made as desired.)

Name

Firm

Street & No.

City

Please ☐ Distributor ☐ Dealer ☐ Contractor
Check ☐ Service ☐ Other



SIGNING the papers are from left to right: J. Donald Cohen, general manager, Stern & Co.; seated, Francis E. Stern, president, Stern & Co.; and Henry J. Martin, district manager, International Harvester Co.

Stern Now Distributes Full Refrigeration

CHICAGO—Stern & Co. of Hartford, Conn., has been named distributor of International Harvester's line of refrigeration products, the company has announced.

Stern will cover the entire states of Connecticut and Vermont as well as Hampden, Hampshire, and Franklin counties in Massachusetts.

Expect 10,000 To Attend January Housewares Show

CHICAGO—Judging from manufacturer and buyer response, the January, 1951, National Housewares and Home Appliance Exhibit will be the biggest in the industry's history, according to A. W. Buddenberg, executive secretary of the National Housewares Manufacturers Association.

With demand for space at an all-time high, the exhibit is expected to play host to more than 10,000 buyers who will see "the greatest concentration of housewares and appliances ever assembled," Buddenberg said.

Upwards of 525 manufacturers will display more than 100 different classifications of merchandise and thousands of new products. They will occupy 763 booths in the more than 300,000 sq. ft. of floor space in the two spacious halls of Chicago's mammoth Navy Pier.

Opening Thursday, Jan. 18, and running through Thursday, Jan. 25, the exhibit will be the 14th national show operated by the NHMA. Show hours will be from 9 a.m. to 5 p.m. daily, except Sunday, Jan. 21, when the exhibit will not be open.

Buensod-Stacey Appoints Kreuttner to Sales Post

NEW YORK CITY—A. C. Buensod, president of Buensod-Stacey, Inc., of New York City, Charlotte, and Greensboro, announced that Joseph W. Kreuttner, formerly vice president and general manager of Air & Refrigeration Corp., has been appointed to the general sales department of Buensod-Stacey.

How 2 Scented 'Tease' Letters Stimulated Dealer Interest In Waste Disposers

WASHINGTON, D. C.—Giving its dealers an installed price on Hotpoint garbage Disposalls—\$179.95—proved to be the stimulant needed to make the dealers "hop to" and push that neglected appliance, the Simon Distributing Corp. here found after a short promotional campaign.

George J. Frank, general sales promotion manager of the firm, declared that the idea aroused so much dealer interest that the distributorship was soon sold out of Disposalls and is now on back order on this appliance.

Dealer interest was aroused by two "teaser" letters sent them by Simon. They were followed by a third letter explaining the installed price deal.

Frank explained that the first letter was scented with tincture of asafetida, an awful smelling medicine. Top half of the letter was devoted to a picture of a fuming garbage can and this headline: "What an awful odor!"

Text of the letter, written long hand with a drawing pencil, read:

"If you can't stand this 'horrible and obnoxious stench' don't throw this paper into your wastebasket—Burn it! Otherwise this offensive odor will permeate your office and stay with you indefinitely.

"How many housewives are going through the same agony by keeping garbage in their kitchen and backyard?"

"The crying need for the Hotpoint garbage Disposall is immense—practically no saturation! Every home should own one!"

"Are you going to be the man to ask Mrs. Housewife to buy a Hotpoint Disposall?"

Obnoxiously yours,
GEORGE FRANK,
Sales Promotion Manager."

To the left of Frank's signature, a black cat glowered at the reader.

The second letter was scented with perfume. Its top half featured the picture of a beautiful flower and this headline: "Beautiful—Fresh—Fragrant Odor."

The text, also pencilled in long hand, read:

"You certainly can stand this lovely, fresh, and fragrant odor—you won't have to burn this paper. Place it on your desk! Put it in your file cabinet! Or throw it in the basket! This odor you can live with!"

"Why? Because it's a very pleasant aroma and we humans love anything that is fragrant and fresh!"

"Why not make your neighborhood bloom by telling and selling the Hotpoint Disposall story? The housewives in your area are awaiting your call to sell her a Hotpoint Disposall. Begin today! Tell them the complete story, and the sales will come fast and easy."

"Coming your way soon—a new and better plan to merchandise the Hotpoint Disposall—watch for it!"

Pleasantly yours,"

Here is the plan that Simon offered to dealers in the third letter:

Simon would advertise the Disposall at the price of \$179.95 completely installed on any first floor. This included materials, plumbing, and electrical work. There would be nothing else to pay.

When the dealer sold a Disposall, he notified the distributor who sent his installation man to deliver and install the unit. The installation man billed the dealer for the \$55 installation charge.

The distributor noted that as installations increase, the fee would be reduced.

Simon suggested to dealers outside the Baltimore and Washington metropolitan area that they contact a local plumber to handle the installations at the advertised price.

In addition to its own advertising, the distributor cooperated with dealers in their advertising plans and made available a Disposall display for use in their stores.

According to Frank, the dealers hopped on the bandwagon and began to sell Disposalls.

Even though the distributor is back ordered on Disposalls now, Frank feels that it is on the right track to volume sales on this appliance.

Furniture, Appl. Store Opens

NIAGARA FALLS, N. Y.—S'dao Furniture, Inc., carrying a complete line of appliances, has been opened at 1318 Niagara St. by Floyd and James S'dao who have been associated with appliance dealers in this area for many years.

G-E Sees Its Production Of Appliances Holding To Record Pace Until '51

BRIDGEPORT, Conn. — General Electric appliance production will continue at its record-breaking pace through the next three months, but will drop off about 20% in 1951, H. L. Andrews, vice president in charge of the company's appliance and merchandise department, predicted recently.

"Although the supply of materials is tightening," he said, "we foresee nothing that will interfere with our scheduled production during the final quarter of this year."

"Our factories should continue running at the rate maintained in the second and third quarters. Consequently, there should be plenty of appliances available for the Christmas trade, although shortages may continue in the most popular housewares lines."

General Electric's output will hit a new high of approximately 12,000,000 appliances in 1950, Andrews said, pointing out that this is the equivalent of one appliance for every three wired homes in the United States.

In 1951, however, because of the diversion of materials to the rearmament program, appliance production will be somewhat less but should approximate the 1949 output.

Despite this decrease, Andrews said, "there is a very definite possibility that the appliance industry will have to do a more intensive merchandising job next year than at almost any time since the war."

Having just returned from a series

of meetings with midwest distributors and retailers, he reported that appliance sales at the retail level are already slowing slightly.

"We still have a substantial backlog of orders to be filled," he said. "But the end of the scare-buying spree and the advent of tightened credit controls and higher income taxes will almost certainly call for much harder selling."

Air Conditioning Contest--

(Concluded from Page 1)

may be considered a unique application of air conditioning by the industry today could be the source of vast profit and sales possibilities tomorrow.

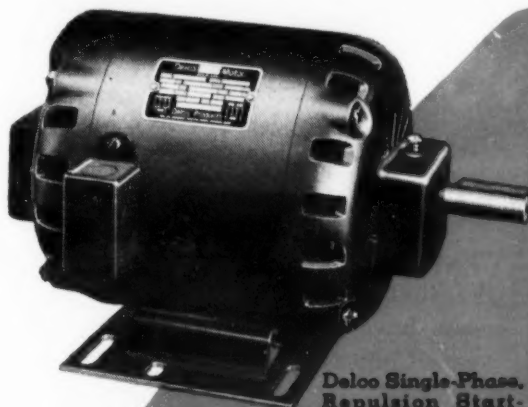
"With times as they are, we think it is to the industry's advantage to know all it can about such unusual installations right now."

"Therefore, we are taking this method of bringing such valuable information out into the open for all to see and use. Naturally, the News plans to give the widest possible publicity to the information submitted in this contest."

"So, if anyone in the air conditioning field has a unique installation story hidden in his files, I urge him to bring it out and let us have a look at it. It may be worth an extra \$100 to its owner."

Ekco Announces Price Rise

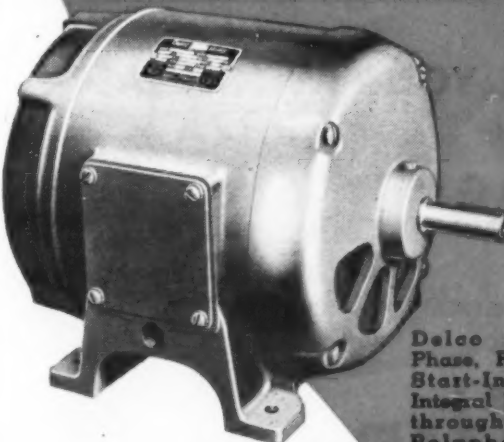
CHICAGO — Price increases of nearly 10% on Ekco Products Co.'s line of stainless steel copper bottom ware were announced recently by Benjamin Ragir, president of the firm.



Delco Single-Phase Repulsion Start-Induction Fractional Motor, 1/4 through 1/2 h.p. Also available in these sizes (only) with Condenser start.



Delco Single-Phase Fractional Motor with current-limiting Capacitor, 1/4 through 1/2 h.p. For Blowers and open type Compressors.



Delco Single-Phase Repulsion Start-Induction Integral Motor, 1 through 5 h.p. Polyphase Integral, 1 through 100 h.p.

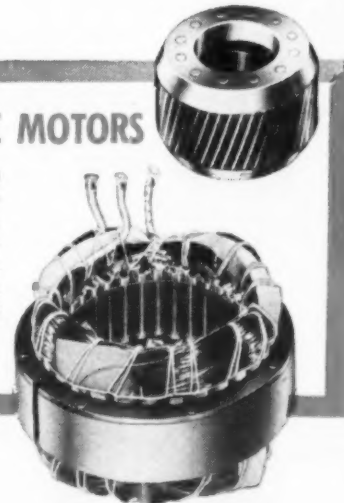
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They'll Do It Every Time By Jimmy Hatlo

McFADER'S DOUGH ALL GOES TO HIS FELLOW CARD PLAYERS, BOOKIES, DICE MEN OR NUMBERS OPERATORS ...



BUT DOES HE GO TO THEM WHEN HE'S "LOANY"? NO! HE HITS CAREFUL CLARENCE, WHO THINKS BOXCARS RUN ON TRACKS AND A FULL HOUSE IS A FAMILY WITH TEN KIDS ...



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VOLUME 61, No. 11, SERIAL No. 1,130, NOVEMBER 13, 1950

"I have always felt that whatever the Divine Providence permitted to occur I was not too proud to report. The people are not served by pussyfooting, or by that sort of journalism in which nobody will ask who is the editor of a paper or the writer of an article, and nobody will care."—Charles A. Dana.

Do You Have 'Both Feet On The Ground'?

What the
serviceman
should know
about VIRGINIA
REFRIGERATION
products

To Charge a System,
Use Refrigerants
That Are
Consistently Pure,
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"EXTRA DRY ESOTOO"
(B. P. +14°F.)

"Extra Dry" is the refrigeration grade SO₂ that service and maintenance engineers have endorsed for more than 20 years. Comes in all popular cylinder sizes.

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Virginia Methyl Chloride is made specifically for refrigeration use. Low moisture content, low acidity and narrow boiling range recommend "V-Meth-L" for the most exacting requirements.

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Virginia Smelting Company is distributor
for Kinetic's "Freon" Refrigerants.

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Handy, throw-away, no-deposit can. The perfect way to charge hermetic systems, water coolers, beverage coolers, vendors. Available filled with "Freon-12" (15 oz.) or "Freon-114" (16 oz.). Each can is precision-filled to make certain the refrigerant is clean and dry. Can-O-Gas features a simple, practical clip-on opener which fits small valves designed for this use. Slip it on the can; turn to puncture seal. It's leakproof, foolproof.

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VIRGINIA
Refrigerants

Lo! the Poor Paleface:
The Indians Had the Right
Idea After All

SPIRITUALLY and politically, the shutting out of God's sunshine, verdant trees and grass from the lives of people who crowd together in the great metropolitan centers of America has changed and weakened our country.

It has strengthened the subversive elements which trade upon discontent. It has arrayed class against class, independence against crassness, labor against management; and has damaged an elemental Something which made America strong.

Economically it is extravagant and foolish, as witness Manhattan Island where hundreds of thousands spend two hours a day just riding to and from their work.

From a military standpoint, population concentrations are a liability from every conceivable angle.

For these and other reasons, decentralization of big business and big cities will and should continue.

America spent its first 150 years moving people and factories to big cities. And its people will spend the next 50 years moving out to the suburbs and back to the smaller cities and towns—unless this orderly migration is interrupted by a catastrophe engineered by politicians, diplomats, and militarists.

Let us not be misled and deluded that dispersion will be economical, at first. We may have to build more streets and super-highways. Our utilities may cost us a little more to construct. And the telephone may be a little busier.

But the markets will be just as great or greater for manufacturers and salesmen. The field for expansion will enlarge for entrepreneurs, engineers, and professional men. Commerce will be just as thriving and the opportunities will be just as numerous, if not more so.

We may require more branch businesses and offices, but the new pattern of life will be infinitely superior to the old—and living conditions will bring us closer to the real America.

Most important of all, we'll be safer.

From mass hysteria and insidious propaganda we can be saved when more and more people live in smaller and smaller communities.

Working in a metropolitan center is O.K., but people who can spend some time amongst grass and trees lead more natural lives. And in communities with plenty of both the staunch spirit of independence and personal responsibility—Americanism—is preserved and defended rigorously and vigorously.

God bless the small towns! May their numbers increase!

Timely Quotation

"People should judge the efficiency of senators and congressmen not by how much money they get out of the Treasury, but by how little money they take out of the pockets of the people."—JAMES F. BYRNES.



OFF THE CHEST

Small Dealer Approves Reg. W, Says It Will Spur Selling, Aid Fight Against Big Stores

Dallas, Tex.

Editor: I have always admired your personal stand in regards to presenting fairness to your editorials in your publication, regarding the welfare of the small businessman.

I refer to the Oct. 30, 1950, publication of the NEWS, under headings "Entry On Credits Mounts As Sales Slump," and "Deposit Plans."

Thank God for Regulation W, as a means of the salvation of the small businessman, who has been pushed out of existence by the methods used by the larger concerns, especially in Dallas. I mean department stores, as well as chain and mail order houses.

These same concerns are the ones that are now crying their lungs out because they have to now get the lead out of their pants and go out and do a little selling.

One of the largest stores in Dallas (department store) has been throwing this at the little dealers. NO DOWN PAYMENT—NO INTEREST OR CARRYING CHARGES—UP TO THREE YEARS TO PAY. How would you as a small dealer like to sell against this? If, as a small dealer your banks required 25% down payment, 8% carrying charges, and a gold plated customer credit rating and as an added insult, full recourse paper on the dealer.

How can the large stores operate this way? This is easy to explain:

First, the large accounts are and have been receiving 80% or better of the merchandise that is shipped into Dallas, for equal distribution, PLUS numerous carload shipments as direct allocations.

Second, getting carload prices on all items purchased from distributors, whether in single or carload lots.

Third, most large department stores are receiving 100% advertising allowances.

Fourth, paying top commission to salesmen of 5%, when the small dealer finds no takers at 10%, because the average salesman at the large stores has an income of \$500 or more because he has an unlimited stock to sell from and at terms no little dealer could possibly meet.

Referring to Mr. Thiele's article in your publication. He states that they represent 500 retail stores. Please check up on the names mentioned in his story and see if you find even one small dealer represented. The group of men referred to in his article are none other than chain operators, distributors, and large department store heads and representatives.

The head of this six-man panel who Mr. Thiele says is a dealer of Ft. Worth is none other than a manager for a store owned and operated by one of the largest Department Stores in Ft. Worth. Write any small dealer, regarding this party, in the city of Ft. Worth, Tex., and I believe that you will find that he is one of the biggest price cutters and unethical dealers in that city. This is the

method used in Ft. Worth by the large department store to have a means under this party's name to get most of the business that they would otherwise lose to the small appliance dealer, and at the same time not lose face with their large store because of price cutting.

I have brought up the previous statements to explain why there is such a wave of price cutting going on in Dallas. Because of previous conditions before Regulation W, small dealers who were unable to meet the terms of the larger stores had to resort to big discounts in order to try to stay open another 24 hours and praying to the Lord that something would happen in that 24 hours that would keep him open another 24 hours.

I have had more customers in my store since the return of Regulation W consequently more business. I have found the banks more liberal on handling paper than before. Surely this would justify the full hearted support of the small dealers.

The small dealers of Texas in the majority also would welcome fair-trade pricing in addition to Regulation W. Why?, because it would give us another tool in which to try to get on terms of merchandising with the chain, and mail order houses, who, because of their buying power, can freeze out small dealers with lower prices.

The small dealer in Texas is at the mercy of the "bigger business" because of the number of lobbyists that we have in the state capitol supported by chains, mail order, and big department stores, who by their financial ability can prevent any plan for the betterment of the small dealer from ever reaching our state governing body.

Yours truly,
(Name withheld on request)

VOTERS SHOULD READ EDITORIALS IN 'NEWS'

401 Jefferson
Gary, Ind.

Editor:

I do want you to know that I enjoy your editorials in your magazine. Your articles show sound thinking and they are written in an interesting style. They should be read by every voter.

Although I am in accounting work rather than sales, I read the copy that comes to LaSalle Extension university.

I. H. SWINEHART

WIDER AUDIENCE NEEDED FOR 'DOPE' ARGUMENTS

Miche Refrigeration Service
Kalamazoo, Mich.

Editor:

Reading your "Inside Dope" I frequently feel that the ideas and style of presentation thereof should have the widest possible audience. The question arises whether or not the most of those you do reach are not already sold.

The ones who really should read this stuff are those who repeatedly vote the fools and traitors back into office. These people are the ones that read our daily newspapers. They should read your "Inside Dope" of July 24.

American industry could do worse than foster and help finance the republication of this column in our daily papers everywhere. Someone should get on the job of spreading this stuff around.

E. H. MICHE

ART SUPPLY STORE WAS CARRIER INSTALLATION

Motors, Inc.
P. O. Box 1185
Jackson, Miss.

Editor:

We have received your Oct. 2 edition of the AIR CONDITIONING & REFRIGERATION NEWS and find that as usual it is a very interesting piece of literature.

However, we noted one glaring error in reference to your article on page 9. The article in question is in reference to two air conditioners at a Philadelphia Art Supply Store. You showed a picture of a Carrier 7½-ton air conditioner, but the article stated that the unit was a 7½-ton G-E.

Since we take great pride in our equipment and the name of Carrier, we dislike for our equipment to be misnamed.

E. C. ALDRIDGE, JR.,
Engineer.

CLEVELAND STADIUM HAD ANNAPOLIS WALK-INS

Freezer Box Div.
1700 West Street, Extended
Annapolis, Md.

Editor:

I was very much interested in seeing the Oct 23 issue of AIR CONDITIONING & REFRIGERATION NEWS, especially page 16 under the heading "Cleveland Stadium Goes Modern In Cold Way."

This operation is undoubtedly one of the largest installations in the country and as mentioned in the

article, had to be accomplished practically over night. All of the sectional walk-in coolers were manufactured by us and as a matter of fact we have supplied units for quite a few ball park installations throughout the country. It was certainly nice to see a picture of one of our coolers in this article even though our name was not mentioned.

N. ERIK ALMEN,
President

'WHAT'S HAPPENED?' IS RIGHT ABOUT U.S.

The Roland-Swisher Co.
Richmond, Ind.

Editor:

I want to compliment you on your editorial under the heading "Inside Dope," "What's Happened to Us?"

This should be put in every publication in the country where everyone can see it. The things that you have covered are one of the greatest contributing factors to our present difficult position, internally and externally, as a nation.

I hope you make this available to the daily papers and give them permission to use it. Keep up the good work you are doing.

H. WIGGANS,
President

IT'S LATER THAN YOU. . .

Knoxville, Tenn.

Editor:

George Taubeneck knows what he's talking about, and it's time (later than most people think) to act.

JOHN G. PETTYJOHN

speaking about TRADE-INS

is a spiffy new 24-page booklet just published by the NEWS. It presents you with some fresh, dandy ideas on how to help eliminate one of your perennial bugaboos, the "trade-in" problem.

The whole problem is divided into three categories and some sound, sensible methods on how to deal with each category are described. 1. Acquiring the "trade-in" and determining its worth. 2. Reconditioning the "trade-in." 3. Marketing the "trade-in."

The whole contents of this booklet is compiled from the best articles on and experiences of other appliance dealers whom the NEWS has talked to in the past year. These ideas are actually used successfully and perhaps they would work as well or better for you. At least you can read about them and see how they fit in with your operation.

The booklet sells for 50¢ a copy. Order now! Use this coupon.

Business News Publishing Co.
450 W. Fort St., Detroit 26, Mich.

Please send me copies of your new booklet "Speaking About Trade-Ins," at 50¢ per copy.

Name
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3 wonderful, new

DISPLAY CASES

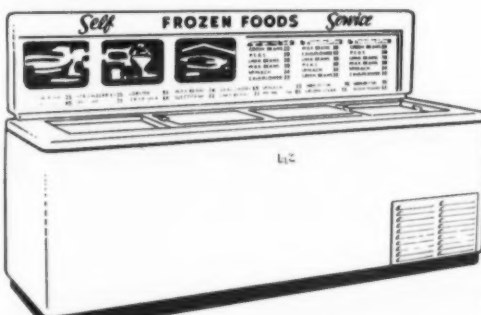
By
BTC



SMART-LOOKING 16 Cubic Foot Display Case. Model DC-16. 76" x 28" floor space. With or without superstructure.



COMPACT 10 Cubic Foot Display Case. Model DC-10. 55½" x 28" floor space. With or without superstructure.



ROOMY 22½ Cubic Foot Display Case. Model DC-23. 96½" x 28" floor space. With or without superstructure.

Take our word for it . . . there'll be plenty of sales and profits ahead if you sell the BTC line. For proof, just look at these three wonderful new BTC Display Cases!

Styled for beauty . . . from the compact 10 cubic foot display case to the gleaming 22½ cubic foot case! And they're all built to give your customers years of service—at less cost than they ever dreamed possible!

Roomier than ever . . . thanks to BTC's vapor-sealed insulation that lets them hold lots more food in lots less space. What's more, they have all the famous BTC features—heavy-gauge Bonderized steel cabinet, brilliant white baked enamel finish, capillary expansion, lateral plate evaporator, plus a five-year warranty against food spoilage and defective operation of the compressor unit.

Get the full facts . . . on these wonderful new cases—write Brewer-Titchener today!



DISPLAY CASES

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Genuine Joe says . . .
"Stock WAGNER
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A stock of genuine Wagner interchangeable replacement armatures makes rotor replacement simple 1-2-3 job . . . and the exclusive "tell" label shows the interchangeability of rotors within a given horsepower on Wagner motors.

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RAPID Refillable DEHYDRATORS

(SIZES 5 CU. IN. TO 200 CU. IN.)

FOR CATALOG AND PRICE LIST
(Give Wholesaler's Name)



Fine PRODUCTS CO.

185 N. WABASH AVE., CHICAGO 1, ILL.

NO Other Line Gives You So Much Quality, Safety, Economy!

'Reflective Radiant Conditioning'

Experimental Setup at Dr. Mills' Home Seeks
Year-Round Comfort by Controlling Body Heat Loss

(Continued from Last Week's Issue)

For heating, a 75-kw. industrial transformer located in an underground vault feeds 240 and 120-volt alternating current to the large panel board in the basement through a three-wire system, part of the current being used directly for the hot water heater, electric range and other appliances, and lighting. Balance of the current is fed into an auto-transformer with four contractors, each of which is actuated by its own air thermostat in the central hall.

The four heating thermostats are mounted in a row beside the one controlling the cooling plants and are set to cut in at different temperatures ranging from 35° to 68° F. These thermostats provide step control of the heating. At the lowest temperature full power is made available to the straight Calrod heating elements in each room.

Next higher thermostat cuts power one quarter, the third reduces it to one half, while the fourth lowers electrical input to the Calrods one quarter their full capacity. Even when running at full capacity, the Calrods do not glow, as in an electric range. Dr. Mills explains that the full 240-volt current is never delivered to a single heating unit. Instead, the current is split so the units on one side of the room receive 120 volts, as do the units on the opposite side of the room.

WE WILL BUY!
SURPLUS
REFRIGERATION CONTROLS
PRESSURE and THERMOSTATIC
ANY QUANTITIES • MUST BE NEW
Write, Phone Or Call For
IMMEDIATE ACTION
TRACO Industrial Corp.
455 W. 19 St., N. Y. 19, WATKINS 4-4302
(Send for Traco's complete list
of sensational bargains)

Part 2

Editor's Note: "Reflection Point," the unusual home of Dr. Clarence Mills in Cincinnati, represents a radical approach to the problem of providing year-round comfort for human beings, and so is described in detail in the accompanying article which is concluded in this issue.

It should be remembered, however, that this is a test installation, and that the engineering and design principles involved must be carefully applied. Much remains to be studied and learned, and although this type of system may ultimately provide the answer to many problems in air conditioning it is still strictly in the experimental stage. So don't throw away your air conditioning manual, give up your franchise, and unload your stock of conventional air conditioning equipment.

But you will find Dr. Mills' installation extremely interesting, and it may give you food for thought.

Heating of each room, however, depends on flicking on the room switch. Amount of current then delivered to the room heater is controlled by the aforementioned room thermostats.

ROOMS HEATED ONLY WHEN THEY'RE OCCUPIED

"Since the heating rods have only a few minutes lag in reaching full radiant heat output, the power need be turned into each room only while that room is actually occupied," states Dr. Mills. "This brings comfort conditioning down to somewhat the same control level as lighting."

It was further emphasized by Dr. Mills that he was not necessarily promoting electrical heating with this test installation in his home.

"But it is very easy to control, and more important, to measure the amount of heat required through use of electrical heating elements. Ultimately, we'll probably have a conventionally fired system supplying hot water for coils in the coves," he indicated.

But this, he added, may very well offer excellent possibilities for a heat pump to supply both heating and cooling since the loads are considerably less than for a conventional

year-round air conditioning system.

To measure electrical consumption Dr. Mills has a battery of watt-hour meters in the basement control room along with recording instruments for temperature and humidity conditions. Accurate records are kept of operating times, too.

EVEN HEAT RADIATION FROM LIGHTING USED

Incidentally, in connection with electrical consumption and controls, Dr. Mills points out that both incandescent and fluorescent lighting is employed in his house. Generally, fluorescent lighting is used when the cooling system is in operation, for these lights add very little to the load. However, when heating is necessary, the conventional incandescent lamps are turned on, for the heat that they produce provides an additional source of radiation to warm the occupants.

Dr. Mills has also recognized that "heat-ray output from the elements sufficient to make one comfortable on entering the room may become excessive as the individual's own heat emission from skin and clothing adds to the prevailing radiational intensity. Rugs and furniture also soon become radiators, as they are warmed by the room's radiant heat input."

"Thus," he says, "we must face the probability that rooms are likely to become uncomfortably warm from radiant heat while air temperatures are still at low levels. Our foil-covered walls and ceilings, while themselves cold, act as passive reflectors of all radiant heat entering the room from heating elements or room occupants—we thus have the equivalent of heat-radiating walls on all sides."

"While we are concerned primarily with occupant comfort in this house, we still must prevent freezing of water pipes and toilets," he adds. "It is conceivable that water pipes might freeze up in the hall bath as we sit comfortably warm in the nearby study during a severe cold snap."

"To guard against this, certain of the heating elements in bathrooms, kitchen, and basement will be connected with a separate thermostat which throws in a small amount of heating power whenever air temperatures are below freezing in those rooms. This safety device is left on whenever the house is unoccupied during the winter season."

SOME OF THE PROBLEMS MET IN EARLY STAGES

Revealing some of the preliminary operational results found since he and Mrs. Mills moved in on April 1 of this year, Dr. Mills said that while "outside temperatures dropped below 30° several times and once below 20°,"

night-time air temperatures inside the house at no time fell below 50° F., even without heat input after 10 p.m.

"Delightful comfort was achieved by radiant heat input through the cold air, although the metering setup was not yet ready to give us heat-load information. The heat came as a soft, even, directionless glow in all parts of the rooms, like winter sunshine at Sun Valley, Idaho, or in the high Swiss Alps. Each room could be heated separately without closing connecting apertures."

"The living room, for instance, has three 8-ft. openings (into dining room, central hall, and glassed-in porch), yet comfort was achieved in the living room without regard to conditions prevailing in the adjacent open areas. Standing between the warmed living room and cold dining room, one side of a person was warm and the other cold. One or two steps into the living room brought even warmth to all sides."

"First experience with cooling operations came with a May heat wave when humidity was high and outside air temperatures rose to 89°. At that time the air filter could be run only at top fan speed—1,000 c.f.m.—and this kept indoor air temperatures close to those prevailing outside. In addition, direct sunlight on east and west sky glare on all sides poured a heavy radiant heat load into the house through the large undraped glassed areas. As a result the small cooling capacity provided by the cove coils was inadequate to give comfort," admitted Dr. Mills.

"Later, in the latter part of June, when all windows except those of the kitchen were covered by heat-reflective blinds or draperies, comfort was achieved even with temperatures as high as 96° outside and 89° inside. It was then a unique experience to take a sweat free afternoon siesta in hot, muggy air."

"Air temperature around the cove cooling coils was 49° F., the zone of cold air having a sharp upper margin and no overflow down into the room. The only cooling of room occupants was thus by radiant heat removal via the heat reflective ceiling. The coils themselves were kept just barely above the frosting point."

7 ROOMS COOLED FOR 25 CENTS PER DAY

"Electric current consumption by the cooling compressor—even with all rooms going on the 96° day—was only 2.4 kilowatts per hour of operation. Seven rooms cooled for 25 cents per 10-hour operating day, at Cincinnati power rates."

"Cove design," revealed Dr. Mills, "is now being improved and adapted to mass factory production in simplified form. Our first rather crude installation does not have the efficiency of operating design which will be possible in mass production. Its cooling capacity is adequate for people sitting quietly but does not take care of the excess heat of exercise."

One engineer who after visiting the house seemed dubious of the system's capacity questioned Dr. Mills as to "what would happen if you rolled up the carpets and danced? Could the system handle

the extra heat and humidity?"

Parried Dr. Mills: "If you had looked carefully, you would have observed that the carpets are tacked down. It's not intended that they be rolled up for dancing. The system is designed strictly for people sitting quietly."

He admitted that additional capacity could perhaps overcome this but he emphasized that the difficulty of this problem would be encountered with any system.

"Room cooling adequate for activity is too chilling for the quiet occupant," he declared.

WHERE WAS COLD AIR ESCAPING FROM?

In connection with the cove coils Dr. Mills recalled that "I didn't think it would be necessary to install drain troughs for condensate beneath the coils, but the Frigidaire engineers insisted on them. Now I'm very thankful that they did."

This was brought home to him quite dramatically, he said, when one day water started overflowing from the cove troughs onto the Nylon carpeting, despite the fact that seven ½-in. copper drain pipes had been run from the troughs to the outside of the house.

Checking the exterior of the house against the blueprints revealed that the outlets of the drain pipes had been cemented shut when the masons had finished the exterior, explained Dr. Mills.

Holes were then cut through the cement so the condensate could drain out.

"Then," he said, "we discovered something very interesting. We weren't quite so cool in the house as we were when the drains were closed up. It appeared that cold air in the cove was leaving the house through the drain pipes. Since we obviously couldn't stop the drains to let the troughs fill up with water and overflow onto the carpeting, I cut small notches in corks and inserted them in the drain pipes. The notches permitted the water to drain out but prevented all but a minute quantity of cold air from leaving."

HOW GOOD IS SYSTEM WITH HIGH HUMIDITY?

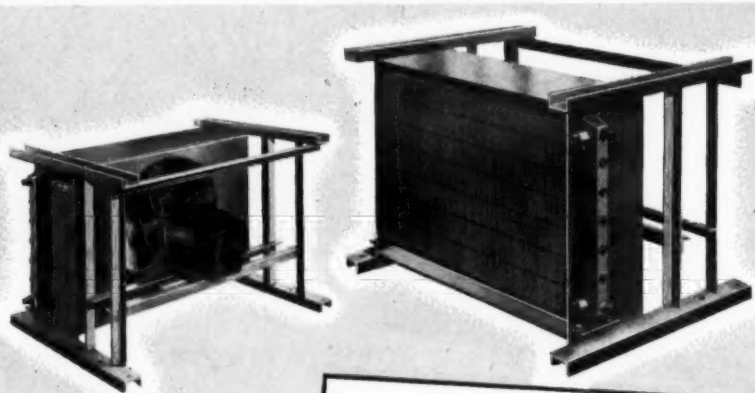
Even though, as Dr. Mills pointed out, considerable moisture is removed from the air, several engineers who visited the home were somewhat skeptical as to whether this system would satisfactorily take care of high relative humidity conditions.

Water vapor, they agreed, would travel to the cold coils in the cove trough, but they questioned whether the rate was fast enough.

Dr. Mills admitted to them that this was a problem, "but," he explained, "what we're trying to do is to keep the occupant's body temperature below the point where he will start to perspire in the first place."

He went on to explain that mechanical cooling is never needed at night since the house comes into quick balance with outside air at night because it is insulated and is of simple wall construction.

"Summer daytime air temperatures (Concluded on next page)"

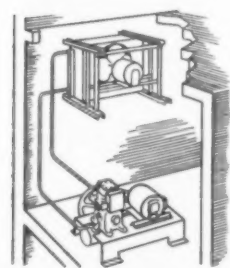


heat-x Combination AIR and WATER COOLED CONDENSERS

- COMPLETE WITH FAN AND MOTOR
- WITH CLEANABLE WATER TUBES
- CAPACITIES ¼ to 5 H. P. (MODELS RAWC)

Here it is: The modern solution to the refrigeration condenser problem. Installation is completely flexible . . . with mounting in the most convenient location. This makes it easy to assure ample air supply.

Independent of emergency failure of either water or air supply.



Reserve capacity always available.

Pays for itself in Water saving

Rugged framework provides for either floor or ceiling mounting. Oversize motors and fans will handle external static pressure if air ductwork is required.

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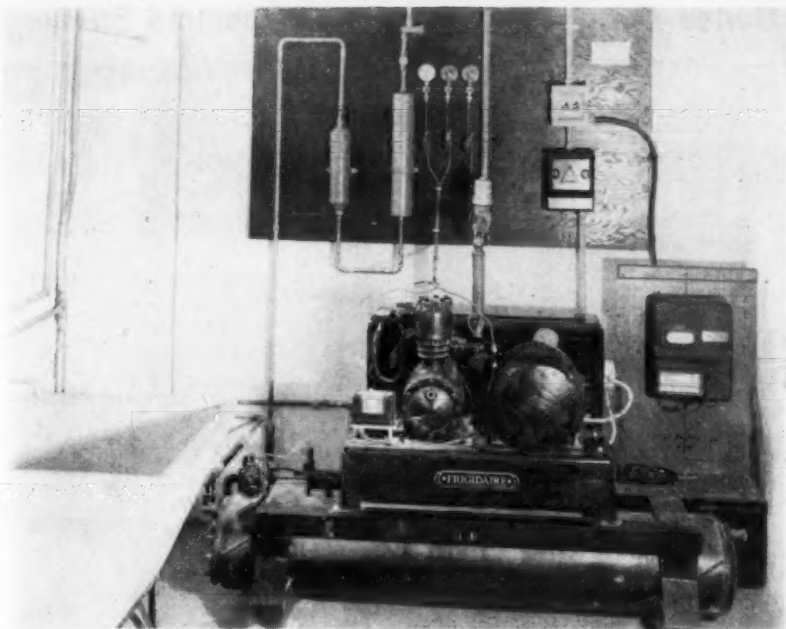
- ★ Precision-built recorders provide money-saving proof of temperature behavior.
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Model "500"
Temperature Recorder.
Priced from \$37.50.

INDICATING & RECORDING THERMOMETERS



COOLING EFFECT FOR COILS in ceiling coves is supplied by 3-hp. Frigidaire unit.



DATA FOR STUDY of "reflective radiant conditioning" experiment is shown being collected here by Dr. Clarence Mills from a battery of recording instruments in the basement.

Conditioning Tests at Mills Home May Affect Many Fields

(Concluded from preceding page)

inside the house range about 6° lower than outside when the cooling is on, and about 6° higher than outside when the cooling is off. This degree of inside air cooling occurs even though no cooled air escapes from the cooling trough, which is provided with Fiberglas insulation. "It results from air cooling in contact with rugs and furniture fabrics which have themselves been radiantly cooled. With cooling turned on in the living room and off in the dining room on a hot day, rug temperature in the living room is always about 2° lower than in the dining room,

although air temperature is practically the same in both rooms."

CAN FOIL BE USED WITH CONVENTIONAL SYSTEMS?

A frequent question asked of Dr. Mills during the first few days of the open house inspections was whether the reflective aluminum foil wall covering developed by Reynolds Metals could be used in any house or one with a conventional year-round air conditioning system.

"With a conventional system," he explained, "you would probably require less heating in winter, but your summer cooling load would be much higher. If you used it in a house without cooling, it would probably mean that you'd have to move out on the 1st of May every year. It would be too hot to live in. This reflective wall covering must be used with cooling."

He further cautioned that an installation of this type must be "carefully engineered" if it is to be successful. Careless misapplication of the materials and principles involved would most likely give unsatisfactory results.

That proper cooling was an essential was repeated several times by

Dr. Mills, who declared, "I'm more interested in cooling than I am in heating. Half of the human race needs cooling all the time while another fourth needs cooling a good part of the year. I also feel that cooling will pay biological dividends much more than the heating."

HOW DOES THIS NEW SYSTEM AFFECT ACOUSTICS?

Another aspect of this unusual residence cited by Dr. Mills was the effect of this year-round condition-

ing system on the acoustics.

"I had been concerned," he said, "whether the metal foil wall covering might not produce a higher than normal noise level, but we very early observed that the amount of echo in the rooms is very low and the rooms are extremely quiet. The answer, however, I believe lies in the coves, which seem to deaden the sound waves."

"This will be investigated thoroughly, but we already know that the noise level in the garage, which has the same wall covering but no heating or cooling coves, is considerably higher than in the other rooms of the house."

Incidentally, although no heating is provided for the garage, Dr. Mills believes that the heat radiated from the warm engine of his car will keep the garage sufficiently warm during winter nights thanks to the reflective radiation from the foil wall surface.

Although Dr. Mills readily grants that his new home, "Reflection Point," represents only the beginning in what will probably be long and continued research, he believes that the principle of "reflective radiant conditioning" offers wide possibilities in many fields.

It should offer "great economies for both summer cooling and winter heating in a great variety of factories and industrial workshops . . . Animal husbandry also offers many profitable applications of low-cost comfort conditioning."

Automobiles, airplanes, tanks, naval vessels offer possibilities, too.

Regardless of what the ultimate outcome and practical applications may be, Dr. Mills' new home will be much talked about, written about, and thought about in all walks of life.

And the man in the street or the engineer who is dubious about being comfortably warm in the house with an indoor air temperature of only 50° F. or less won't be alone in his thoughts.

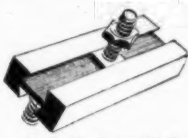
"Mrs. Mills," the good doctor confesses, "thinks we should reserve a room at the hotel this winter—just in case."

Distributor Names L. D. White

DALLAS—L. Dale White has been appointed regional sales representative for Bock Corp., distributor of Carrier air conditioning and Duo-Therm heating equipment. His territory covers all of North Texas.

MR. PARTS JOBBER—

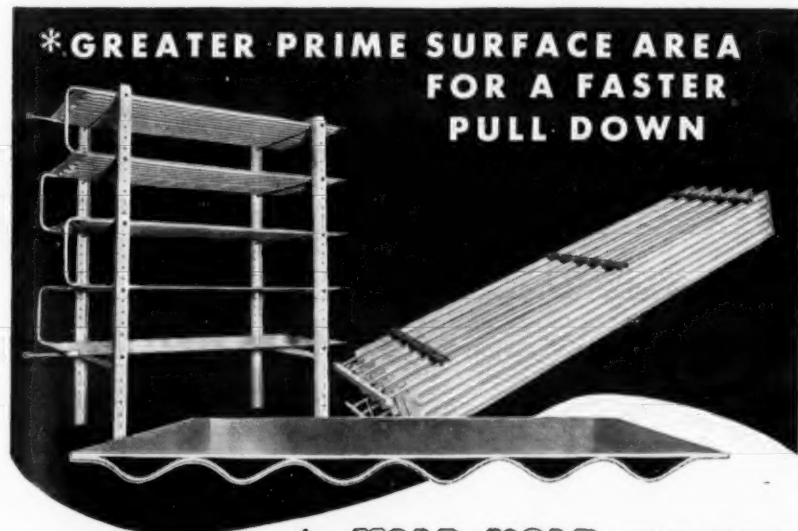
Have you any one item that sells a host of other units? If you can answer YES, then we know you are handling Motor Adapters; and we know also, they are selling motors, belts, pulleys, controls and other allied items for you.



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One outer surface of the plate is flat and the other is embossed to form the channels through which the coolant flows. This provides direct refrigerant contact and the equivalent of 100% prime surface. The size of the refrigerant pas-

sage and the smooth contour of the return bend reduces pressure drop to the absolute minimum. Plates can't possibly become clogged or oil logged.

The flat, top surface of Serpentine Plates adapts itself readily to the construction of shelves and stands and banks to add extra convenience to holding and freezing rooms. Once installed, they provide a lifetime of efficient, dependable refrigeration performance. For proof . . . just ask anyone who uses one of the half million Kold-Hold Serpentine Plates in use today.

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Wide customer acceptance and Universal Cooler's good name in the industry are evidence of the dependability of products sold under the Universal Cooler name. Top quality condensing units are for sale wherever you see the Universal Cooler sign.

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Universal Cooler and its authorized wholesalers both recognize the importance of keeping replacement parts readily available for use in field servicing. Wherever you see the Universal Cooler sign, genuine Universal Cooler replacement parts are carried in stock.

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Wherever you see the Universal Cooler sign, you will find an experienced, reliable wholesaler, prepared to furnish responsible, competent attention to your needs. He and Universal Cooler work together closely to furnish unsurpassed products and services in his community. Look to him with confidence for Universal Cooler condensing units and genuine replacement parts.

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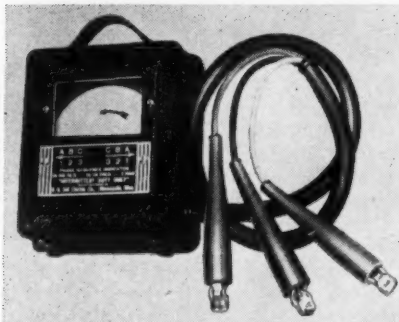


COOLER
OHIO

What's New

When requesting further information on new products, please use "Information Center" form.

'Selco' Indicator Operates on Higher Frequencies



KEY NO. P-1121

MINNEAPOLIS — A polyphase sequence indicator which operates on higher frequencies and at a greater cycle span than conventional indicators has been introduced by H. H. Sell Electric Co., here.

Marketed as the "Selco" phase rotation indicator, the instrument has an operating range from 50 to 600 volts, 25 to 400 cycles. At 200 volts or greater, the Selco indicator will operate up to 2,000 cycles.

The Selco method gives correct phase indication regardless of voltage or circuit conditions. The Selco indicator protects equipment and assures that any polyphase wiring

is properly connected, the company said.

A self-contained instrument, the Selco indicator shows phase sequence by direction of disc rotation rather than by lamps. Phase sequence is immediate and positive by numerical, alphabetical, color coding, and CW-CCW methods.

Weighing less than 3½ lbs. and measuring only 5½ in. by 6 in. by 3 in. with a large 1¼-in. by 3-in. unbreakable window for good visibility, the Selco indicator requires only one connection of the conductors to the polyphase line.

Without any changing of leads or moving of switches, a safe, quick indication of phase sequence is shown. The heavy duty conductors are permanently attached and identified to avoid errors. Clips are insulated and ready for positive attachment, and are permanently marked for phase sequence.

Sturdily constructed, the Selco indicator has a drawn metal case with black wrinkle finish. The shockproof mechanism has an instrument movement consisting of a 4-in. enameled, aluminum disc mounted on a chrome steel shaft, which operates with the disc either vertical or horizontal.

An instruction plate is attached.

Control Regulates Temp. By Pre-Selected Schedule



KEY NO. P-1122

CHICAGO — Controlling temperature by pre-determined schedules is the function of the model CPR time-temperature program controller, newest addition to the "Veri-Tron" line of electronic control and measurement apparatus by Taco West Corp.

This instrument, 9 in. wide, 18 in. high, and 8 in. deep, is designed for flush or surface mounting.

The upper section contains a modified model C Veri-Tron electronic controller, having plug-in compartmented construction, snap-action control contacts, and featuring uniform control levels independent of line voltage variations.

The lower compartment contains a synchronous motor-driven cam, which by means of a simple back lash free linkage, positions the control index arm of the controller automatically as called for by the cam contour.

The cam is of a malleable material which is easily marked with the scriber provided and may be sheared by the user to produce any desired time cycle on the printed disc, the company said. Safety clutches to safeguard the mechanical drive are integrally provided.

A full gasketed glazed cover permits observing the cam or cycle position at all times. This cover is also said to permit ready removal for the purpose of changing cams and facilitate initial wiring as it assures unobstructed access to the master barrier terminal block and conduit knock outs.

Applications in the field of instrumentation include refrigeration and food processing. A variety of standard and special scales, ranging from -300°F. to 3,400°F. or centigrade equivalent, are available.

Ebco Introduces Insulated Stainless Steel Fountain



KEY NO. P-1123

COLUMBUS, Ohio — The first insulated, all-stainless steel drinking fountain has just been introduced by The Ebco Mfg. Co., here, maker of Oasis electric drinking water coolers.

According to A. R. Benua, company president, the new fountain includes Ebco's popular 12000 bubbler and also features several major improvements in design and construction.

According to Benua, the new fountain is virtually indestructible. It will not chip, crack, or break. He claims it is the only fountain to include a filler outlet for a glass, pitcher, or carafe, in addition to a bubbler.

Plumbing is concealed and is packed in rock wool insulation. The fountain meets all public health and sanitary plumbing codes.

This new Oasis fountain, Model SF-145, is packed complete and ready for normal installation.

United Upright Model Features Balanced Freezing

KEY NO. P-1124

HUDSON, Wis. — A new 15-cu. ft. upright freezer that features "balanced freezing" has been introduced by the United Refrigerator Co. here.

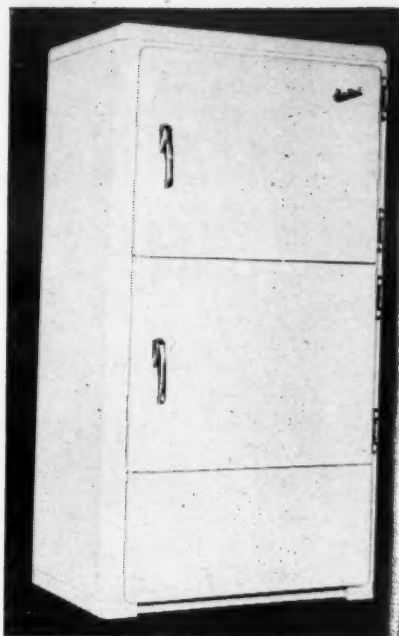
"Balanced freezing," according to the manufacturer, consists of "scientific placement of cooling coils, more than adequate insulation, two separate food compartments, and dual doors to minimize cold loss."

The freezer, designed primarily for commercial use, stands 68½ in. high, is 35¼ in. wide, and 28¾ in. deep.

The cabinet is made of auto-body steel, all welded construction with heavy gauge welded steel channel type base. It is Bonderized and finished with two coats of white Dulux baked enamel.

Condensing unit ¼-hp., hermetically sealed. It operates on 115-volt, 60-cycle, a.c. only, and is warranted for five years.

The interior is made of heavy gauge, zinc coated steel, finished with two coats of the new DuPont white "food compartment" finish that is said to be acid, grease, abrasion, and chip resistant. It has Royalite interior door panels and direct con-



tact freezing plates.

The freezer, called the model UF-15, is insulated with fibrous glass. Shipping weight is about 475 lbs.

Penguin Improves Console Refrigerator Models



KEY NO. P-1125

COLLEGE POINT, L. I., N. Y. — Improved 18th Century and Contemporary console models are included in the 1951 line of Penguin refrigerated furniture being manufactured by Springer Industries, Inc.

The refrigerated left-hand compartment of the "plug-in" models has 3.5 cu. ft. of storage space. This sec-

tion contains an evaporator with three self-releasing ice cube trays which hold 42 cubes.

The compartment is also equipped with a wire shelf, a glass defrosting tray, and a seven-point-range temperature control, and is insulated throughout with Fiberglas. The refrigeration system is powered by a Tecumseh ½-hp., hermetically-sealed condensing unit.

The right-hand compartment, for bottle goods, is equipped with an adjustable shelf and three glass holders. Both compartments have built-in locks.

The custom-built cabinets are made of hardwoods and veneers of selected-grain mahogany, walnut, and limed oak, hand-rubbed to a soft luster, according to the company. Dimensions of the models are 42 in. high (closed), 42 in. wide, and 18 in. deep.

Serving sections are finished with wood-grained Formica to match the finish of the cabinet proper and have mirror backs and sides.

A new catalog on the Penguin line is available.

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COMPLETELY PACKAGED
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Experience proves Governair can save you up to \$5,000 on a 50-ton Governair unit that gives greater dependability and more "engineered efficiency" than ever before!

If you want the best—if you want the most economical and reliable air-conditioning unit on the market... CHOOSE GOVERNNAIR and SAVE!



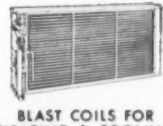
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In requesting additional information on "What's New" and "Current Literature Available" items, please use Key Nos. shown on these items.

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AIR CONDITIONING & REFRIGERATION NEWS
Reader Service Dept.
450 W. Fort St., Detroit 26, Mich.

What's New (Cont.)

'Aquamat' Water Pump Occupies Minimum Space



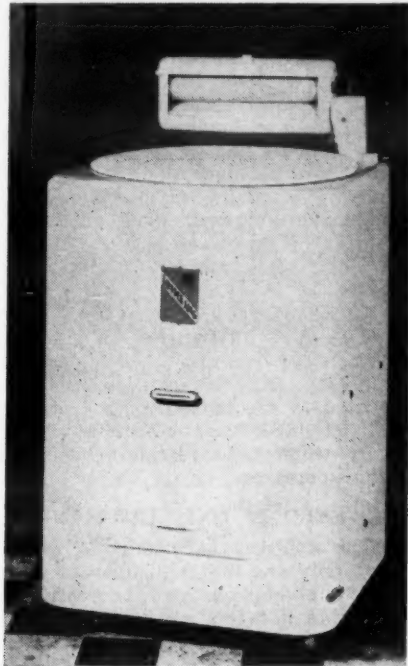
KEY NO. P-1126

RICHMOND, Calif.—For pumping well, spring, or cistern water into the home, Jacuzzi Bros., Inc., here, has developed a space-saving, one-unit water system called the Aquamat, which is now being marketed nationally.

The Aquamat consists of a 10-gal. stainless galvanized steel pressure tank under which is concealed a jet pump and motor unit.

Entire unit stands only 27 in. high, and is 16 in. in diameter. The 1/2-hp. motor is of standard make, horizontal type, slow speed (1,750 r.p.m.). Pump is a standard Jacuzzi jet-type unit.

The water system, which will pump 250 g.p.h. from depths to 22 ft., is delivered assembled and ready to plug into a wall socket. List price is currently \$89.50, f.o.b. factory.



Laundry-King 'Standard' Model Comes In Small Size

KEY NO. P-1127

BASE LINE, Mich.—A small size washing machine that is claimed to be a standard washing machine in everything but size has been introduced by Laundry-King, Inc. here under that trade name.

Though the machine measures only 18 in. in width and depth and stands 28 in. high, (without wringer), it is said to wash 5 lbs. of clothes at one time.

It is supplied with a power wringer that may be detached and stored inside, leaving a smooth work surface top. The cabinet is finished in white duco-enamel.

The Laundry-King utilizes an aluminum agitator to produce a "thorotumble water action" that soaks, gently rubs, and flexes every fiber in the washing load.

A flexible drain hose with an automatic power-driven pump drains the machine quickly, and rinsing is done in the machine without removing the wash. The power-driven wringer has an automatic safety release, and features balloon-type rolls and adjustable pressure controls for various materials.

The 1/4-hp. motor requires no lubrication, and is warranted by the manufacturer. The transmission has a minimum of operating parts, all sealed in oil for lifetime use in a sturdy steel shell. The entire unit weighs approximately 100 lbs. Suggested retail price is \$79.50.

Precipitron Will Handle Air Flowing Up or Down

KEY NO. P-1128

PITTSBURGH—A new Precipitron electronic air cleaner, constructed for upward or downward air flow to conserve floor space and simplify maintenance has recently been introduced by Westinghouse Electric Corp. here.

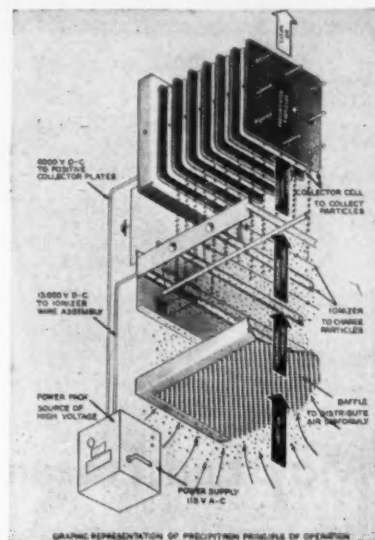
Designed to remove dust, dirt, smoke, soot, and other air-borne solids from normal air, the new Precipitron charges the solid particles positively. It then passes the air through a set of alternately charged collector plates where the solids are moved by electrostatic attraction.

The vertical air flow Precipitron is available in ratings of 1,200 c.f.m. and up. It is claimed to remove 90% of all air-borne particles traveling at 333 f.p.m. and 85% of those traveling at 400 f.p.m. Power supply is 115 volts, single phase, 50 or 60-cycle.

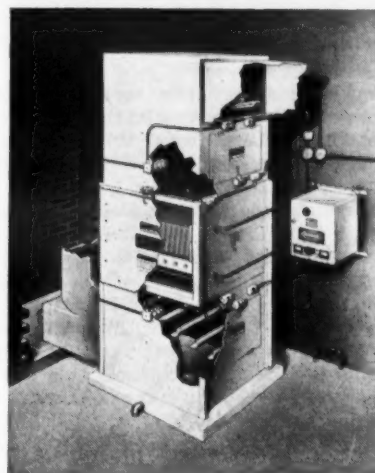
Mounting the unit in a vertical heating or air conditioning duct results in a saving of floor space. The modular assembly adds to the unit's flexibility.

The unit frame, with a projected floor area of approximately 4 sq. ft. for the smallest unit to 16 sq. ft. for the largest unit, serves as a support for air cleaning components as well as a structural casing for the Precipitron.

With a frame height of only 34 1/2 in., unused space above and below the unit provides access for any necessary inspections and servicing.



CLOSEUP of precipitator shows how particles are charged.



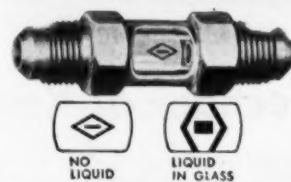
INSTALLED precipitator saves valuable floor space.

Imperial Liquid Indicator Has Double-Sight Ports

KEY NO. P-1129

CHICAGO—A new straight-through liquid indicator with double-sight ports has been announced by The Imperial Brass Mfg. Co., here.

The unit has an indicating "Diamond-Eye" which shows at a glance when there is sufficient liquid in system. When glass tube is filled with liquid, "Diamond-Eye" on one



port is magnified and distorted when viewed from opposite port, giving definite evidence of sufficient refrigerant. Glass tube is right at surface of port where it can be easily seen.

Tube is pressure tested Pyrex glass, with indicator baked on for permanence. Two seals at each end of tube protect against leakage. The primary seal is non-resilient and is made of Teflon, which is impervious to all refrigerants. A secondary resilient seal maintains constant pressure on glass.

"This combination of seals has been designed to assure enduring, leakproof performance," the company said. "Every unit is pressure tested."

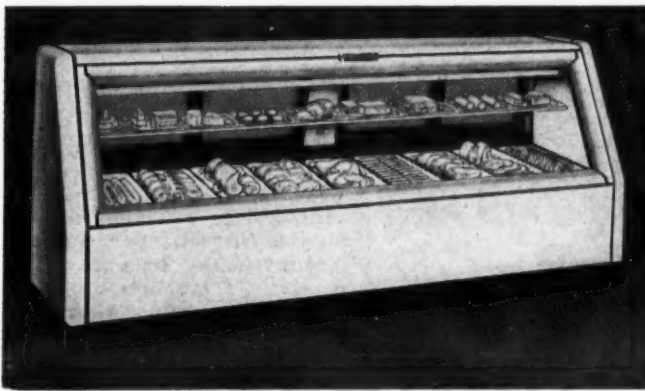
Indicator is available in 1/4-in., 3/8-in., and 1/2-in. sizes with male flare connections on each end and also with male flare on one end and female flare on the other. Catalog numbers are 266-C and 267-C.

You make unusually Big Profits!

Your Customers get

"Extra" Value for their money!

... when you sell Pinnacle Refrigerators



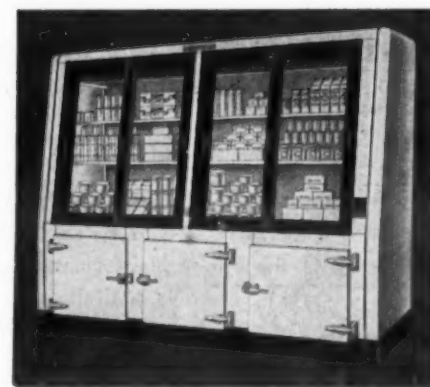
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- ★ COUNTER HIGH CASES.
- ★ FISH AND POULTRY CASES.
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- ★ All hardware of heavy duty cast brass type.
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Export Dept.: 39 Broadway, New York

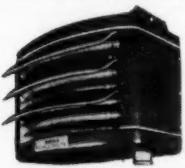


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STEAM & HOT WATER
60" Rounded front.
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Service. Hand-
somerly finished.



Wall Model 6 WH

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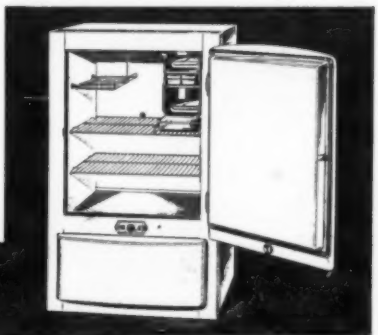
Every American Family...
NEEDS A SECOND, SMALLER REFRIGERATOR
FOR THE HOME • OFFICE • COTTAGE • BOAT •
RECREATION ROOM • SMALL APARTMENT, ETC.

A WIDE OPEN MARKET
FOR DEALER PROFITS!

MARVEL Specialized REFRIGERATOR
WILL MEET THIS CONSUMER DEMAND 100%

The Result of 13 Years of
Refrigeration Engineering

You can make extra profits when you add the MARVEL 400 to your present lines. There's a larger market than you may realize for a really good 4-foot unit. Requires only 23" x 20" floor space. Door opens full 90° even when unit is smack against a wall. Requires no side or back ventilation. Hermetically sealed compressor. Underwriters approved! Needed by doctors for refrigerating penicillin, etc. Make multiple sales to apartment houses—both original equipment and replacements—cottages, resorts, etc. The ideal second refrigerator for the home—recreation room, shop, home bar.



Write FOR DEALER LITERATURE!
MARVEL INDUSTRIES, Inc.
Sturgis, Mich.



BOTTLENECK ENDER: This is one of the mechanical refrigerator cars that the Fruit Growers Express hopes will help solve the problem of shipping frozen foods. The refrigeration units are made by Frigidaire Div., General Motors Corp. Ice and salt refrigeration has made it difficult in the past to consistently maintain the sufficiently low temperatures required by frozen foods.

Mechanical Reefers May End Frozen Food Bottleneck

WASHINGTON, D. C.—End of what has frequently been called the "bottleneck of the frozen foods industry" is now in sight with the announcement from Fruit Growers Express that 25 new refrigerator cars equipped with mechanical refrigeration are abuilding or have been completed and another 80 are on order.

Two types of systems are being used in the new reefers, one being a diesel-electric propelled design made by Frigidaire Div., General Motors Corp., the other a gasoline engine-driven unit as produced by U. S. Thermo Control Co.

Many shippers of frozen foods have felt that conventional ice-and-salt refrigerator cars do not maintain sufficiently low temperatures in transit or on layovers in rail yards. There has been increased pressure from such shippers for cars that will assure temperatures of zero or below during transit.

As a result of research over the past two years with nine cars equipped with five different systems of refrigeration, Fruit Growers Express has finally decided to go ahead with two of the systems in the 105 cars now on order.

The putting into service of the new Fruit Growers Express cars will mark the first time that mechanically-refrigerated cars have been available to frozen food shippers on a commercial basis. Some railroads and refrigerator car lines, in cooperation with the U. S. Department of Agriculture and other governmental agencies, have experimented over recent years with mechanical refrigerator cars of various types, but such cars have not been used heretofore to any extent in regular shipping operations.

One of the more successful recent experiments was made in 1947 with a refrigerator car developed by Frigid Transport Co., Inc., of New

York City. This car made use of the ammonia expansion principle and since it required no moving parts, low temperature could be maintained constantly even when the car was not in motion. However, up to now this type of car has not been put into large-scale commercial production.

Fruit Growers Express has ordered 1,020 conventional-type refrigerator cars in addition to the 105 being equipped with mechanical refrigeration. These are ice-and-salt cars with heavy insulation. However, they are so designed that they can be later converted to mechanical refrigeration if the demand arises. These cars are mostly being built by Pacific Car & Foundry Co., Seattle, Wash. Fruit Growers Express and its affiliates, Western Fruit Express Co., and Burlington Refrigerator Express Co., are building 100 in their own shops.

FLORIDA FROZEN JUICE CRISIS

The frozen food industry's insistence on better types of refrigerator cars for long hauls was brought to a head the past summer when the railroads and refrigerated truck lines got into a tussle over serving the Florida frozen citrus concentrate industry.

The Interstate Commerce Commission issued a ruling restricting truckers holding temporary certificates, from buying or leasing additional equipment until permanent certificates are granted. Meanwhile, I.C.C. has asked the Agriculture Department to conduct tests on the relative merits of rail and truck refrigeration for preserving frozen foods and citrus concentrates on the road.

The Frigidaire diesel-electric system consists of a 34-hp. diesel engine—20 kw. alternator unit to supply electric power required, plus a "Freon" condenser, compressor, and evaporator coils. The diesel-alternator unit with compressor and condenser are located in a compartment at one end of the car, separated from the loading space by an insulated wall. The side walls of this compartment are provided with louvered openings to permit passage of air to the condenser and to the engine radiator.

0° MAINTAINED IN SUMMER

The compressor motor, condenser fan motor, and evaporator blower motor all get power from the alternator that generates 220-volt a.c. 60-cycle current. The compressor has capacity for 1½ tons of refrigeration at -10° F. evaporator temperature and approximately 2.5 tons at 5° F. Capacity is said to be adequate to produce and maintain 0° temperatures under summer weather conditions.

Finned evaporators are located in an insulated recess, integral with car loading space, over the top of the machinery compartment. There are two motor-driven blower fans placed behind the evaporator to force air through the cooling coil out into the loading space. Fuel tanks of 240-gal. capacity are underneath the car, sufficient for a coast-to-coast trip without refueling.

In operation, after starting the diesel-electric unit, air is forced through the finned cooling coil by the fans, out into the top of the car loading space. The air circulates to the opposite end of the car and is forced around, or through, the shipment of frozen foods. It is redrawn by the fans to be recirculated through the evaporator.

The system is equipped for stand-by operation with electric motors which may be plugged in at stations when operation of the diesel engine is not necessary—as for pre-cooling of cars.

The Thermo King system comprises two identical self-contained units installed in a compartment at one end of the car. Each unit con-

sists of a 28-hp. Crosley water-cooled gasoline engine, 6-cylinder compressor, cooling coil, air circulating fan, and controls. "Freon" is used as the refrigerant. Each unit is complete and can be readily removed as a package.

The floor racks and wall flues serve as ducts through which air delivery is made. Floor racks have a solid surface extending full width and length of loading space, forming a continuous floor duct. Air is forced downward through the cooling coils, under the floor racks, up through the side and end wall flues, and over the top of the load for return to the cooling coil chamber for recirculation.

To eliminate uneven temperatures during the "off" period of unit operation, an electric battery-powered auxiliary fan is provided. This is located at the bottom of the cooling coil chamber and starts automatically when both refrigerating units stop operating.

SECOND UNIT CUTS IN

The control thermostat is set so that only one unit will operate when the refrigeration load requirements fall short of the point necessary to operate two units. If the load should increase beyond the point where one unit cannot handle it, the second unit will automatically cut in.

For pre-cooling, both units are in operation, but after the empty car is cooled to the temperature level at which the temperature control is set, one of the units will ordinarily protect the load most of the time thereafter. The temperature control thermostat has a range of -5° to 60° F.

These units have approximate capacity for 1½ tons refrigeration each, at 0° F. and 2½ tons each at 23° F. One unit in operation is usually sufficient to maintain 0° in the car except under abnormally high summer temperature conditions, when the second unit will intermittently operate for short periods.

Each unit is equipped with an automatic or time-regulated defrosting device which goes into operation every seven hours.

Heating of the car with the system is provided by a reverse cycle of refrigeration. The system automatically switches to the heating cycle when outside temperature becomes low enough to so require. Reverse cycle heating also occurs during the defrosting periods.

The engines are equipped with a dry sump oiling system providing

5 gals. of lubricating oil for each engine. A combination starter-generator is directly mounted on the crankshaft of each engine. Six storage batteries are housed in two metal boxes beneath the car, three for each refrigerating unit. Two 16-gal. fuel tanks are located beneath the end of the car.

COST DETAILS NOT RELEASED

Details have not been made public as to how expensive these new mechanically refrigerated cars may be to construct or to operate, in comparison with existing types of ice-and-salt reefer cars.

One transport authority indicates that construction costs should not be much greater than for ordinary end-bunker cars using ice as a refrigerant, except for the extra cost of the motors. Initial operating costs might run somewhat higher than for ice and salt cars, but costs would tend to decline if a considerable number of such cars are kept in operation and used consistently in carrying frozen foods.

Frozen food packers have indicated in the past they would be willing to pay higher-than-average rates for cars offering assurance of below-zero temperatures. Somewhat higher freight charges, they indicate, would be preferable to a gamble that all or part of a load of frozen foods may deteriorate or spoil through inadequate refrigeration.

0° RECOMMENDED

Although 0° is the recommended temperature for most frozen foods for transport or storage, the railroads and car companies up to now have found it difficult to furnish cars that will consistently hold temperatures below a range of 12° to 15° F.

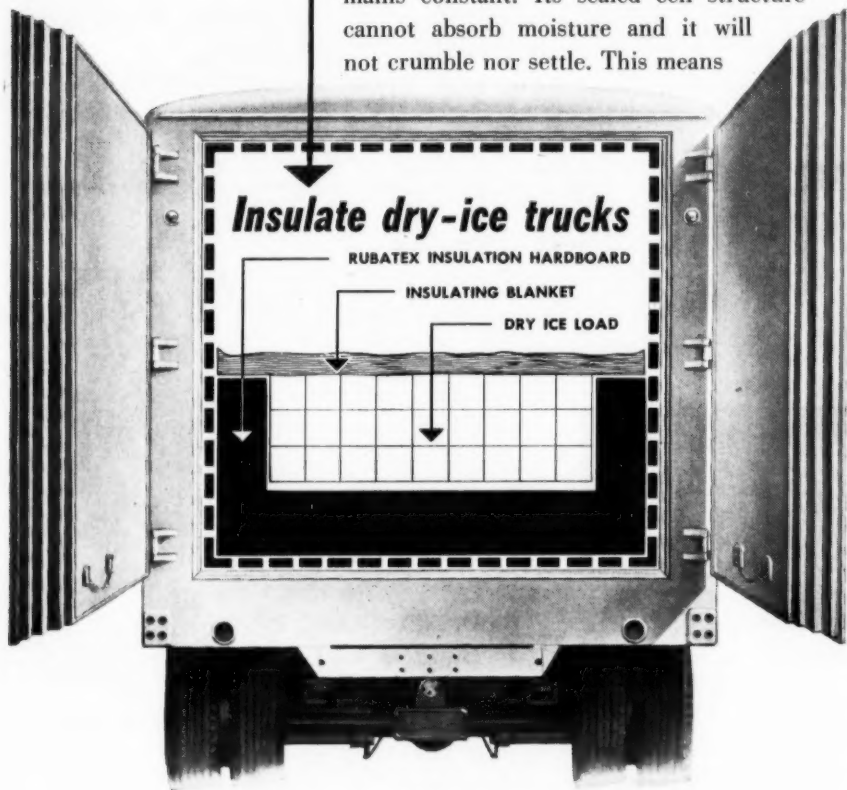
As one refrigeration expert explains it, "The ideal condition is to avoid costly and dangerous rises in temperatures of frozen products from the time they leave the freezing plant or warehouse until they reach another warehouse at the end of their trip."

A Fruit Growers Express spokesman said in connection with the new cars now on order, "The railroads and refrigerator car companies of the country are not lagging behind in providing transportation needs of the frozen foods industry. They have not only kept pace with the rapid growth of the industry but have made that growth possible by providing means of accomplishing the present wide distribution of frozen foods throughout the country."

RUBATEX BUNKERS

Thanks to the efficiency of RUBATEX Insulation Hardboard, The Liquid Carbonic Corporation is enabled to adapt standard truck and trailer bodies to the exacting job of transporting Dry Ice.

RUBATEX has a K factor of 0.21 which remains constant. Its sealed cell structure cannot absorb moisture and it will not crumble nor settle. This means



negligible maintenance and repair costs. RUBATEX has ample strength for installation on truck floors, yet it weighs only 4½ lbs. per cubic foot. The material resists oxidation and is rot, vermin and termite proof.

RUBATEX Insulation Hardboard provides really economical low-temperature insulation. Let us show you facts. For further information, write for Design Data Bulletin RBH-1-50. Great American Industries, Inc., RUBATEX DIVISION, BEDFORD, VIRGINIA.

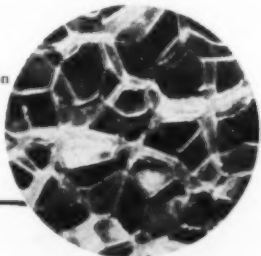
K FACTOR 0.21

ZERO MOISTURE ABSORPTION

MINIMUM 'ICE' LOSS

LOW MAINTENANCE COSTS

CLOSED CELLS shut out heat, cold and moisture. Photo-micrograph of a section of RUBATEX Insulation Hardboard shows the dense structure of individually sealed cells which give this product its exceptional insulating properties.



RUBATEX[®] INSULATION HARDBOARD

PAR PARmetic...

TWO GREAT NAMES with a Single Purpose... The BEST in Refrigeration!

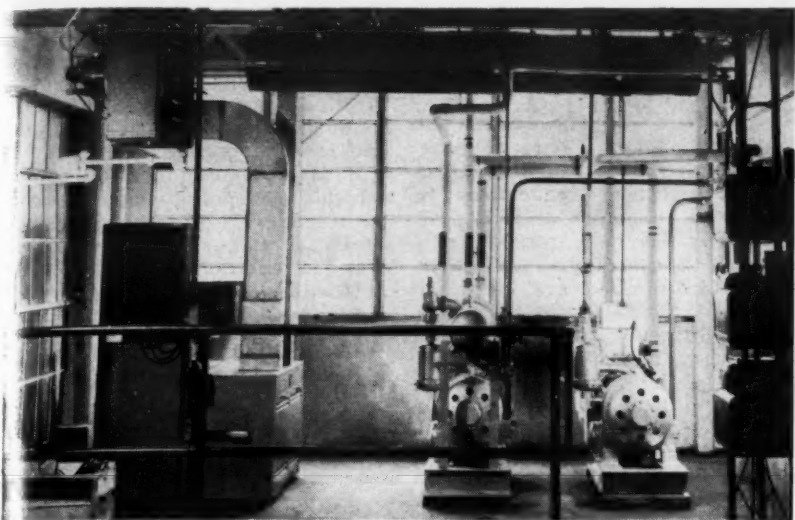
Shop from coast-to-coast—and you'll find PAR and PARmetic lines preferred for a variety of reasons. They're top quality at competitive prices; they give quiet, rugged performance under exacting conditions; they require a minimum of maintenance; they're attractive to look at; they're field serviceable; and each line comes in a range of sizes that gives a "tailor-made" unit for commercial or home refrigeration problems. When you buy or specify, make it PAR or PARmetic. Dollar for dollar, it's your best refrigeration buy.



BY COMPARISON — YOU'LL BUY



LYNCH CORPORATION
PAR COMPRESSOR DIVISION
TOLLEDO, OHIO



SEVERE ARCTIC CONDITIONS: They are produced by this low-temperature installation at the Hobart Bros. Co. to test starting characteristics of gasoline engines in extreme cold.

Test Room Chilled to -65°F.

TROY, Ohio—To test the starting characteristics of gasoline engines under severe Arctic conditions, Hobart Bros. Co., well-known manufacturer of welding equipment, is now using a large -65° F. test chamber designed and installed by Airtemp Construction Co. under the direction of Fred Kilburn.

A two-stage cascade system employing "Freon-12" in the high temperature stage and "Freon-22" in the low stage cools the test chamber, which is a cork and cement room measuring 12 ft. long, 2 ft. wide, and 12 ft. high inside.

The room is insulated with 12 in. of corkboard laid in three layers

and finished inside and out with cement plaster. In front of the test room proper is a vestibule, 8 ft. long by 8 ft. wide and 12 ft. high which is insulated with 6 in. of corkboard.

HOW COOLING IS ACCOMPLISHED

Cooling of the test room is accomplished by means of a low temperature blower unit equipped with an electrical defrosting system. Operating on "Freon-22," this coil is kept in a flooded condition by means of a high side float valve.

The high stage of the system consists of an Airtemp 5-cylinder radial compressor powered by a 30-hp. motor and equipped with a standard condenser. Refrigerant is fed from the condenser through the tubes of a water chiller which serves as the interstage condenser.

Instead of cooling water, however, the expanding "Freon-12" condenses the hot gas "Freon-22" discharged from the Airtemp 7-cylinder radial compressor and fed into the shell of the water chiller. The low-stage machine is driven by a 30-hp. motor.

Operating conditions for the design temperature are as follows: low stage suction pressure, 18 in. Hg.; low stage condensing pressure, 30 to 50 p.s.i.g.; high stage average suction pressure, 5 p.s.i.g.; high stage condensing pressure, 100 p.s.i.g.

FROM NORMAL TO -65° IN DAY

Tests have shown, the company says, that the refrigerating system will bring the test chamber and a 3,000-lb. engine-driven generator from room temperature down to -65° F. in approximately 24 hours. Calculated capacity of the installation is 30,000 B.t.u. per hour at a -75° F. suction temperature and 100° F. condensing temperature.

An interesting factor of this installation is the provision for supplying conditioned make-up air to the heaters and carburetors of the engines being tested in the chamber.

Make-up air flows through a silica gel dehumidifier unit which is designed to provide a maximum of 100 c.f.m. of air dehumidified to 0.6 grains of moisture per pound. After going through the dehumidifier, the air is passed through two water coils and one direct expansion "Freon" coil operating at a temperature between 0° and 20° F. and thence into the test chamber, being admitted only when such make-up air is required by the equipment.

Regeneration of the silica gel dehumidifier is accomplished by means of a 20,000-watt heating unit which is thermostatically controlled to provide 265° F. air for the reactivation side of the dehumidifier.

Perfex Corp. Appoints 3 Field Representatives For Temperature Controls

MILWAUKEE—Three new field representatives have been added to the sales staff of the temperature controls division of Perfex Corp., according to V. P. Black, vice president and sales manager of Perfex.

Hugh C. Cameron of Indianapolis, is newly appointed district manager for the state of Indiana. A native of Oxford, N. C., Cameron served from 1942 to 1947 in the U. S. Air Corps and separated from the service as a lieutenant colonel. Recently he had been a sales engineer with the Lustron Corp.

Hugh H. Hackett, Jr., of New York City, will serve as district manager for the states of Pennsylvania, Maryland, and Virginia. A Penn State college graduate engineer, Hackett served over three years as radioman, U. S. Navy. Before joining Perfex, he was associated as field engineer with the F. S. Stokes Machine Co.

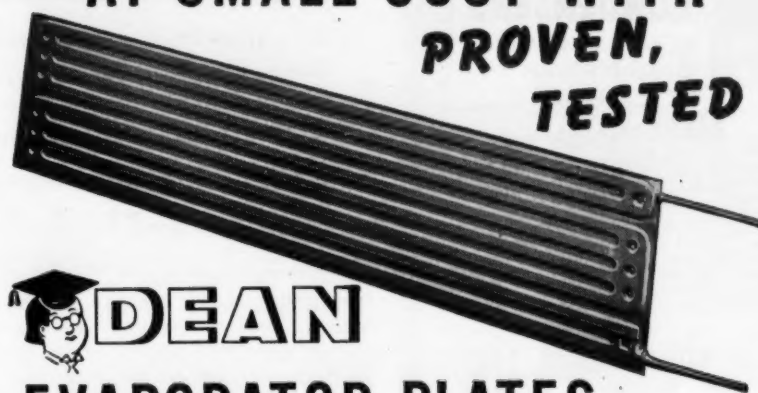
William P. McDowell has been assigned the task of appointing and training new Perfex distributors throughout the country.

For the past several years, McDowell has gathered experience in the heating field as sales representative for Williams Oil-O-Matic and as assistant to the general sales manager of Lustron Corp.

Sheridan Files Name In East

BUFFALO—A business name has been filed in the Erie County clerk's office for the Sheridan Refrigeration Co., 7801 Sheridan, Clarence, N. Y.

GET **BIG** PERFORMANCE AT SMALL COST WITH **PROVEN, TESTED**



DEAN

EVAPORATOR PLATES

There's a DEAN cold plate for every application . . . designed and built by men who have years of experience and practical "know how" in solving difficult refrigeration problems . . . your guarantee of quality.

DEAN makes cold plates for ice cream cabinets, locker plants, soda fountains,

farm milk coolers, farm freeze cabinets, low temperature test rooms, frosted food refrigerators, window displays, food counters, refrigerated transportation and sub-zero applications for industrial chilling. Custom built plates available on special order, such as cylinders, U's, angles, tanks, stainless steel, etc. Plates also available for Baudelot-Type Coolers.

SEND FOR YOUR COPY OF OUR TECHNICAL DATA BOOK

DEAN
PRODUCTS, INC.

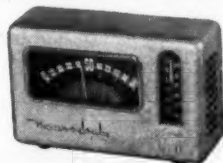
Factory & Main Office
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FOR PRECISE READINGS ON
RELATIVE HUMIDITY
and TEMPERATURE
... RELY ON



Accurate control and operation of heating and air conditioning installations are both essential in the attainment of peak efficiency in industrial operations. Be sure of these facts with Bendix-Friez precision instruments built to the most exacting standards by the foremost makers of weather instruments.



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Model 185

Precision Humidity and Temperature Indicator
Hair-operated and calibrated to professional standards of accuracy by the maker of the world's finest weather instruments. Handsome, modern case—4" high, 5 1/2" wide, 1 1/2" deep.



BENDIX-FRIEZ

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Hand Aspirated Psychrometer
Accurate readings obtainable without special skill. Psychrometric readings can be taken at any point desired however inaccessible.



BENDIX-FRIEZ

Model 160

Portable Humidity and Temperature Recorder
3" charts, 10 or 30 hour records. Modern design . . . handy for small space and difficult locations . . . built to meet unusual conditions.

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FRIEZ INSTRUMENT DIVISION of
Taylor Avenue
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Exclusive Sales: Bendix International Division
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Stores More in
Less Space . . .
Cools Faster !

Speed-Freeze

bottle beverage
coolers

write

IDEAL COOLER CORPORATION
2953 EASTON AVE., ST. LOUIS 6, MO.

Because your next job of air conditioning or refrigeration—whether a large installation or a small one—will represent an important investment on the part of your client or customer, you can render a definite service by recommending use of equipment designed to operate with "Freon" safe refrigerants.

"Freon" refrigerants are safe . . . pure as modern laboratory-controlled methods of manufacturing can make them. They're nontoxic, nonflammable and nonexplosive . . . harmless to foods, fabrics, flesh, furs or finishes. They have no color or taste, practically no odor . . .

and are stable and inert. "Freon" refrigerants will not corrode or otherwise harm equipment.

In fact, "Freon" refrigerants actually help to prevent equipment breakdowns. For their exceptional dryness greatly reduces the risk of "freeze-ups" and provides protection against the formation of abrasive sludges.

Check these many advantages the next time you consider equipment for an installation you're planning. Then be sure to plan for maximum safety and economy by recommending machines designed to utilize "Freon" safe refriger-

ants. E. I. du Pont de Nemours & Co. (Inc.), Organic Chemicals Department, "Kinetic" Chemicals Division, Wilmington 98, Del.



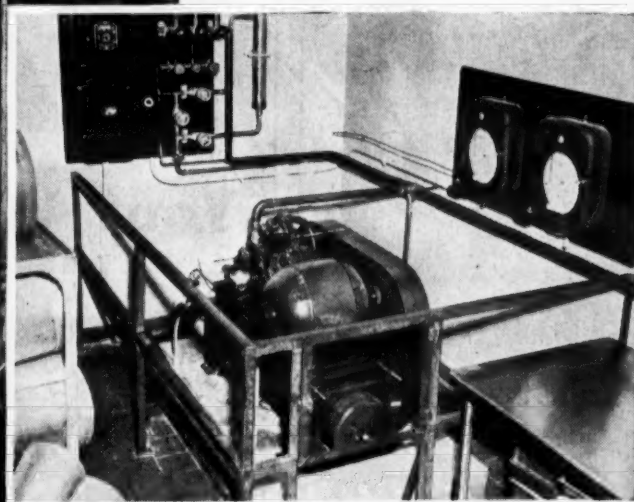
Better Things for Better Living . . . through Chemistry



FREON
SAFE REFRIGERANTS

"Freon" is Du Pont's registered trade mark for its fluorinated hydrocarbon refrigerants

Large installation



Typical small, compact equipment utilizing "Freon" refrigerants is this 7 1/2-horsepower General Electric unit in a commissary.

... or small

Sizable Carrier refrigerating unit in a midwestern hospital uses "Freon" safe refrigerants.

... to be sure it's a safe investment
... recommend "Freon" refrigerants

**CLEANABLE
WATER-COOLED
CONDENSERS**
More Efficient Double-Tube
Counter-flow Design



1/2 to
25-Ton
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WHOLESALE IN PRINCIPAL CITIES
Write for Catalog and Prices
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WE WILL BUY!
SURPLUS REFRIGERATION UNITS
BELT-DRIVEN OR HERMETICS
1/6 H.P. to 10 H.P.
ANY QUANTITIES • MUST BE NEW
Write, Phone Or Call For
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(Send for Traco's complete list
of sensational bargains)

Current Literature Available

To obtain further information on the literature listed below, please refer to key number preceding listing. Please use the "Information Center" form on "What's New" page.

New Electric Housewares Catalog Issued by G-E

KEY NO. L-1121

BRIDGEPORT, Conn.—A 1950-51 Heating Device Catalog on electric housewares was issued recently by the General Electric Co.

The catalog, printed in full color, illustrates and describes the company's line of irons, triple-whip mixer, automatic toaster, automatic roaster, and sandwich grill and waffle iron.

Included are detailed instructions on how to send these appliances to General Electric Appliance Service Centers.

Westinghouse Booklet Gives Specifications

KEY NO. L-1122

MANSFIELD, Ohio—A new 16-page booklet to provide a quick specification and sales reference for plumbing dealers is now being made available by Westinghouse Electric appliance division.

Detailed construction and design specifications covering the complete

line of Westinghouse dishwashers, water heaters, Waste-Away garbage disposers, water coolers, and ventilating fans are presented. In addition, product sales features plus illustration and smaller feature cuts are included in the booklet.

The booklet can be used as a mailing or handout piece. Ample space has been provided on the back cover to be used for dealer or distributor imprint if desired it is pointed out.

Reliance Bulletin Lists Authorized Service Shop

KEY NO. L-1123

CLEVELAND—Service Bulletin A-2025 just published by Reliance Electric & Engineering Co. contains up-to-the-minute information on the authorized service shops of the company.

Eighty-three service shops, located in 31 states in all parts of the country, are listed in the four-page folder which also gives the complete address, telephone number, and name of the man in charge of each service shop.

Aeroquip Publishes Data On 3 Hose, Fitting Types

KEY NO. L-1124

JACKSON, Mich.—Data on hose and fittings for refrigeration and numerous industrial applications is contained in bulletin No. 113 just prepared by Aeroquip Corp. here.

Detailed specifications and other pertinent information are listed on the firm's 1502, 1503, and 1509 type hose and fittings.

In addition, the bulletin points out the features and advantages claimed for Aeroquip detachable and reusable fittings, self-sealing couplings, and "breakaway" couplings intended for hydraulically operated farm equipment.

Dravo Catalog Describes Crane Cab Conditioners

KEY NO. L-1125

PITTSBURGH—Descriptive literature on its two new crane cab conditioners and crane cab cooler has been prepared by the air conditioning and combustion department of Dravo Corp. here.

One of the conditioning units, the model VHD, provides continuous ventilation, heating, and dust filtering. The other, the model VHDF, does all these things and also removes fumes from the cab.

The cooler is equipped with refrigerating mechanism to reduce the air temperature in the cab when operating in excessively high temperatures. It also provides ventilation and dust and fume protection for the cab operator.

Then it takes up the functions of a septic tank and soil absorption system, covers design requirements for new or existing septic tanks which are to serve a disposer, and gives recommendations on capacity, location, and other important factors.

It also supplies data on soil absorption systems, giving information on seepage areas, trench absorption areas and proper location of the system. In addition, the booklet lists authoritative sources which can be referred to for further information.

Bell & Gossett Issues 2 Quick Selection Sheets

KEY NO. L-1127

MORTON GROVE, Ill.—Bell & Gossett Co., here, has issued two new quick selection sheets on its refrigeration condensers and heat exchangers.

They are Bulletin No. CR-10-3 covering model CRF shell and finned tube condensers, and Bulletin No. CU-1149 on model RH refrigeration heat exchanger.

Westinghouse Book Is On 'Electrical Packages'

KEY NO. L-1128

PITTSBURGH—A new 31-page booklet describing "electrical packages" that may be used by builders and architects as strong, exclusive sales features in their homes is available from the Better Homes Bureau of Westinghouse Electric Corp.

The booklet contains numerous photographs and layout sketches of several homes designed and constructed by the Better Homes Bureau in conjunction with electric utilities, architects, and builders. Floor plans and wiring details are illustrated in the booklet.

Several "electrical packages" are suggested so the builder can select those most suitable to the size, type, and price bracket of the homes he builds. User benefits have been suggested for each "electrical package" to help the builder sell his home most effectively.

A copy of Booklet B-4691 may be obtained by writing to Westinghouse Electric Corp., Box 2099, Pittsburgh 30, Pa.

Garbage Disposer with Septic Tank Discussed

KEY NO. L-1126

BRIDGEPORT, Conn.—A new booklet giving full details on how garbage disposers can be used with septic tanks has been prepared by General Electric Co.

The 8-page publication first explains how a standard private sewage system can be used for handling both household sewage and fresh food wastes from the disposer.

**Make
UNILECTRIC
TRADE-MARK
Your Wiring Department**

Custom-Engineered **UNILECTRIC**
WIRING SYSTEMS
Offer Definite Money-Making Advantages

These advantages can be yours! When you make Unilectric your "wiring department," you have available a staff of engineers concerned only with designing wiring systems—specialists with long experience in economically solving product wiring problems. You have a production staff who know the vital shortcuts in mass production. And your wiring systems come from the hands of expert workers whose skill is a matter of pride in the daily delivery of tens of thousands of systems built to precision standards.

So, you will find that UNILECTRIC Wiring Systems cost less—and offer other advantages too:

- Their standardized quality promotes dependable operation of your product.
- Their neat, professional appearance increases sales acceptance of your product.
- By purchasing your entire wiring system as one or more complete assemblies, you simplify inventory problems, eliminate waste.
- UNILECTRIC engineering can reduce your factory installation costs and field servicing to a minimum.

It costs you nothing to find out how UNILECTRIC can serve you best! Write today.

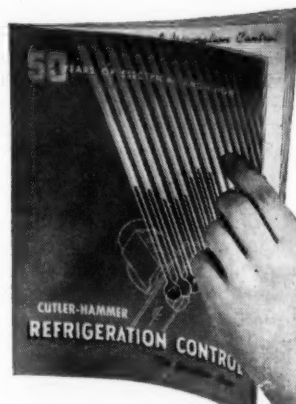


AMANA MODEL 18 FOOD FREEZER

Modern UNILECTRIC Wiring System provides utmost safety and dependability for this new AMANA 18 cu. ft. upright freezer. Noted for their high engineering standards, all AMANA freezers and refrigerators have been UNILECTRIC wired since 1947.

AMANA is one of 132 leading manufacturers of refrigerators, freezers, washing machines, clothes dryers, home heating plants, water coolers, dish washers and other electrical products who specify UNILECTRIC Wiring Systems for their products.

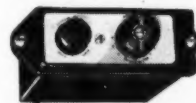
Wiring Headquarters for the
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**UNITED MANUFACTURING
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407 South Sixth Street • Milwaukee 4, Wisconsin
DESIGNERS, MANUFACTURERS OF UNILECTRIC
WIRING SYSTEMS AND COMPONENTS



**"Never Saw
Its Equal!"**

C-H CATALOG SHOWS "SPECIFIC-FIT" REPLACEMENT UNITS FOR MORE THAN 1000 DIFFERENT REFRIGERATOR MODELS

Here are just a few of the "specific-fit" replacement controls in the unequalled Cutler-Hammer line.



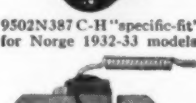
9502N417 C-H "specific-fit" for Briggs 1937 models.



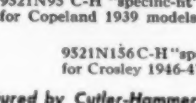
9521N11 C-H "specific-fit" for Leonard 1937 models.



9502N387 C-H "specific-fit" for Norge 1932-33 models.



9521N95 C-H "specific-fit" for Copeland 1939 models.



9521N156 C-H "specific-fit" for Crosley 1946-47 models.

Want to save time and trouble on your refrigeration control replacements? Then make the Cutler-Hammer refrigeration control catalog your standard "guide" on replacements. Here you will find "specific-fit" units which are not merely listed but already manufactured by Cutler-Hammer for more than 1,000 individual refrigerator models which the industry has produced since 1925. No "modifying", no fussing, no compromises, when you put in a "specific-fit" replacement control units. And you'll also quickly see how the widely-known Cutler-Hammer name (advertised in The Saturday Evening Post, Time, Newsweek, American Home, Better Homes & Gardens, House & Garden, etc.) builds customer confidence and good will. The C-H refrigeration control catalog, as well as the items you need, are available through your authorized C-H refrigeration wholesaler. Do not forget, this C-H refrigeration control line includes the outstanding general purpose replacement control (9521N9 for use with motors having "built-in" overload protection. CUTLER-HAMMER, Inc., 1362 St. Paul Ave., Milwaukee 1, Wisconsin.

Featured by Cutler-Hammer refrigeration wholesalers and recommended by alert service dealers from coast to coast.

BACK TO FUNDAMENTALS

Refrigeration Principles for
Beginners & Experienced Engineers, Salesmen, and Dealers

By K. M. Newcum, Author of
THE MASTER SERVICE MANUALS

Theory of Refrigeration

DEFINITION OF REFRIGERATION

Refrigeration is simply a process of removing heat from a given space. As a result the temperature is lowered. Lowering the temperature of food products retards the growth of bacteria and prevents or defers spoilage.

Refrigeration lowers the temperature of the air in an air conditioned building. This removal of heat provides a more comfortable and healthful condition for persons in the building.

TWO COMMON METHODS OF REMOVING HEAT

Ice is a common method used to remove heat. Refrigeration, or heat removal, by the process of melting ice is used for many purposes. It is necessary to replenish the supply of ice at regular intervals in order to continue the process of refrigeration.

Mechanical refrigeration provides an automatic means of removing heat. It is now being used in many homes, businesses, and industries for human comfort and where lower temperatures are necessary in the processing or preserving of various products.

A refrigerator, in which food and other products are refrigerated, is usually termed "cold." It is cold because, by means of melting ice or mechanical refrigeration, the temperature within the refrigerator is reduced.

As cold is so closely associated with refrigeration more should be known about it.

DEFINITION OF COLD

Cold merely means *not warm*. It is a word used to define the absence of heat. Technically there is no such thing as cold. When an object feels cold, it is because a certain amount of heat has been removed from it.

To make a comparison, cold is to heat what dark is to light. When light is shut out of a space it becomes dark. When heat is removed from a space it becomes cold.

Cold and dark are *negative* terms. They merely indicate the absence of heat and light.

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DEMONSTRATION OF COLD

It is natural to think of any cold object, such as, for example, a cake of ice, giving off or radiating cold. This is not the case, however, for cold is not a form of energy, hence it cannot be given off or radiated.

An illustration of this may be noted in Fig. 1. The ice is cold and the hand is warm. The heat leaving the warm (higher temperature) hand and flowing to the cold (lower temperature) ice may cause a cooling sensation, but the cold does not travel to the hand. The hand feels colder because it loses heat to the ice.

Warm or hot, and cool or cold are terms defining the relative degree of intensity of heat contained in a space or substance. The lower the temperature the cooler or colder it is.

DEFINITION OF HEAT

Heat is a form of energy, generated by the transfer of some other form of energy, such as combustion, chemical action, or friction. Heat is a *positive* term. It indicates the presence of something.

The principal source of heat is the Sun. Heat is produced by burning fuel in the heating plant in our homes to provide warmth for health and comfort. This is known as oxidation.

Friction, such as may be produced by briskly rubbing the palms of our hands together, produces heat, and a warming effect is noticed.

Electric current is used to produce heat. Examples of heat production by electrical resistance are the electric iron and the bathroom heater.

Some chemical changes create heat. By mixing calcium chloride with water to make a brine the temperature of the solution is temporarily increased by the chemical reaction.

When air or any vapor is compressed, its temperature temporarily increases. Compression then is another way heat may be produced.

ABSOLUTE ZERO

Heat is present in any substance when the temperature of the substance is above -460°F . (460° below zero). Scientists have determined that -460°F . is the coldest condition obtainable—a point where no more heat is present. This temperature is thus termed *absolute zero*.

Entering an unheated house in the winter gives one a sensation of feeling very cold. The house is cold, but only by comparison with the human body. There is heat in the house, even though it feels cold, because its temperature is above absolute zero, but since its temperature is lower than body temperature, it feels cold. Heat is present in all substances if the temperature is above absolute zero.

THREE STATES OF MATTER

"Matter" exists in three states, namely: solid (such as ice); liquid (such as water or liquid refrigerant); and vapor or gas (such as steam or gaseous refrigerant). The state in which matter exists is directly dependent upon the amount of heat it contains.

All matter is composed of infinitely small particles known as atoms. When the chemical elements combine to form compounds, as is the case when oxygen and hydrogen combine to form water (H_2O), the atoms of each element combine with the atoms of the other and form small bodies called "molecules."

MOLECULAR MOTION

It was just pointed out that the state in which matter exists is directly dependent upon the quantity of heat it contains, or, what is the same thing, the degree of energy with which its molecules move. Attention was previously drawn to the fact that, the more heat contained in a substance, the more energetic the motion or movement of the molecules of which it is composed.

In a solid substance the molecules are in close contact with one another and move comparatively very short distances. In a liquid the molecules are separated more than in a solid,

Cooling Effect of Ice

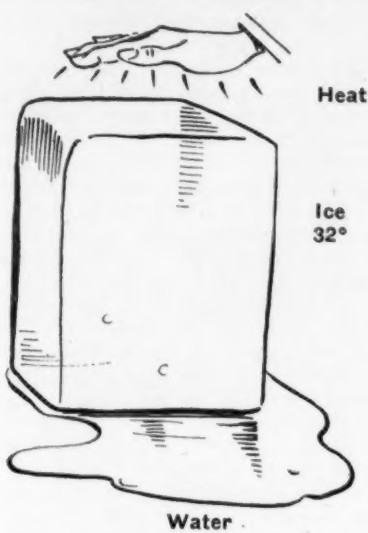


Fig. 1—Heat flows from the warm hand to the cold ice.

and move comparatively greater distances. In a gas the molecules become widely separated and their motion is violent, because the distance of travel is so much greater.

KINETIC THEORY OF HEAT

The *kinetic theory of heat* assumes that the molecules composing any substances are in constant motion; that they are mutually attracted and held together by a force like magnetism. The force of this attraction is effective for only short distances.

The greater and more energetic the molecular motion of the substance, the more heat it contains. As the heat increases, so does the molecular motion.

When heat is removed, there is a corresponding decrease in the motion of the molecules, until finally, when a temperature of -460°F . (absolute zero) is reached, the molecules cease to have motion.

FLOW OF HEAT

Heat always travels from a warmer to a colder object or substance. This is demonstrated in Fig. 1. The heat is flowing from the warmer hand to the colder surface of the ice. It never flows in the opposite direction.

In the same way that water tends to seek its own level, the temperatures of two near objects or substances tend to equalize, the heat from the warmer object or substance flowing to the colder one.

Heat penetrates or flows through everything. There is no known substance or material that will totally exclude or stop the flow of heat, so long as there is a temperature difference.

There are materials known as insulating materials that will retard or throttle the flow of heat. These materials are used to insulate refrigerators and refrigerated spaces.

The more efficient the insulation, the more heat it will keep out of the refrigerator. But even with the very efficient insulating materials now used in refrigeration, most of the operation of the refrigeration system is to remove the heat which has entered through the insulated walls.

Many people cannot understand why their refrigeration machines operate during periods when they are not opening the refrigerator doors. This operation is necessary simply to remove the heat always leaking

Some people are blessed with remarkable memories, and can recall everything they've ever read or studied. Most of us, however, need to renew our learning at periodical intervals. It is with that in mind that the editors of AIR CONDITIONING & REFRIGERATION NEWS proudly present a new series of articles on what makes refrigeration work by the world's most widely read authority on this subject, K. M. Newcum. Refrigeration servicemen and engineers will recognize his name at once, for they have bought hundreds of thousands of his easy-to-read books.

Sales managers with whom this series has been discussed have expressed the fervent hope that dealers and their salesmen will read it, too. Anyone who sells household and commercial refrigeration, freezers, and air conditioning should be able to describe the mechanisms of their products to customers and prospects. Too often factory material on this subject is largely confined to the superiority of one make over another; and a great many dealers never get a chance to see the whole picture.

So here it is:

- (1) A "refresher" course for servicemen and engineers.
- (2) A sound education in fundamental principles for dealers and salesmen.

through the insulation, attempting to equalize the refrigerator temperature with that of the room in which the refrigerator is located.

It would be a very simple problem to maintain suitable low temperatures in the refrigerated space if this constant flow of heat from the warmer to the colder substance or space did not have to be dealt with.

(To Be Continued)

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When you handle the Worthington line, you're ready for anything... with the most complete range of types and capacities.

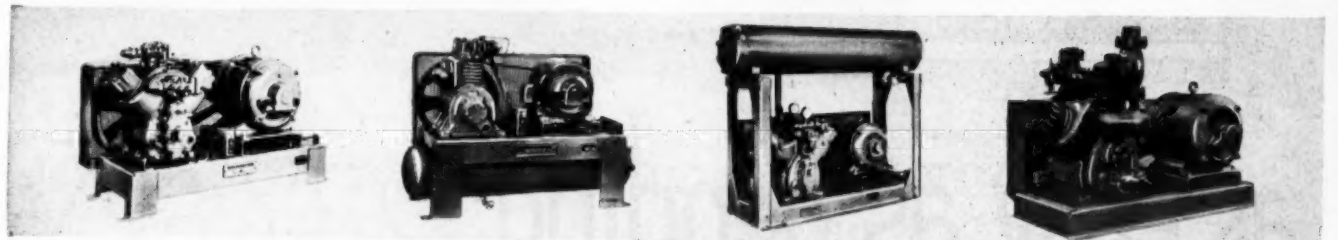
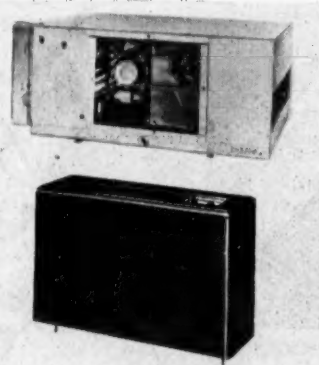
And because Worthington air conditioning and refrigeration equipment is Worthington-made, not just Worthington-assembled... you benefit from better performance—which means customer satisfaction and fewer unprofitable service calls—and unit responsibility on the part of the manufacturer.

Take advantage of the completeness of the Worthington line and capitalize on Worthington's national advertising (TIME, NEWSWEEK, BUSINESS WEEK and industrial magazines). Find out why there's more worth in Worthington by writing to Worthington Pump and Machinery Corporation, Air Conditioning and Refrigeration Division, Harrison, N. J.

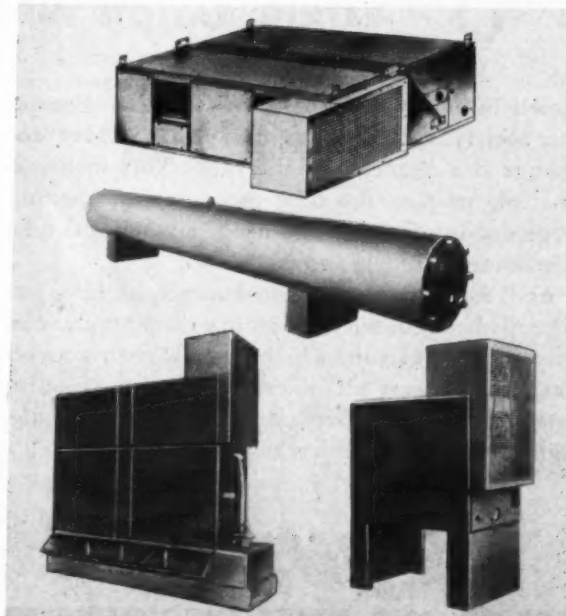
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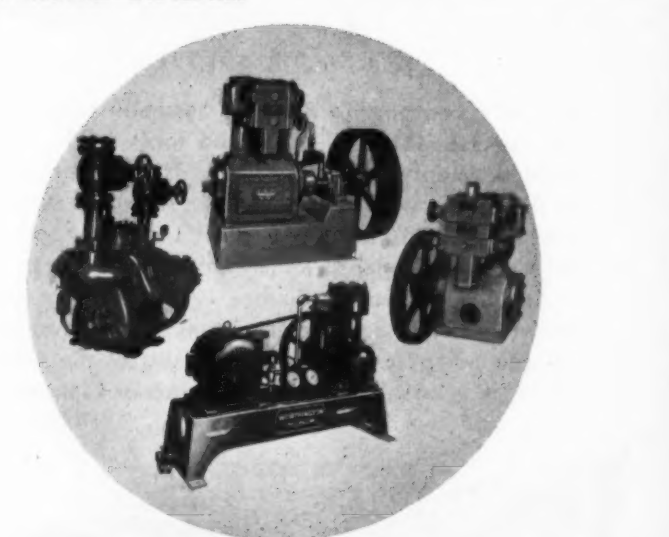


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WORTHINGTON



A BALANCED FRANCHISE...A BALANCED LINE



An electronic outdoor control system for hot water, steam, or warm air is demonstrated by Ed Mahoney of Minneapolis-Honeywell Regulator Co., at opening of the company's "Parade of Progress" exhibit.

M-H Shows 38 New Controls In U.S. Tour

MINNEAPOLIS—An instrument that harnesses a tiny breeze to protect workers in atomic energy laboratories is one of 38 new automatic controls displayed by Minneapolis-Honeywell Regulator Co. in a coast-to-coast tour that was launched recently in Rochester, N. Y.

The road show, called the "Parade of Progress," will cover more than 60 U. S. Cities and end in the spring of 1952, said John E. Haines, vice president of the company's commercial division.

The new electronic instrument,

called an air velocity controller, was developed for the Atomic Energy Commission and is now in use in a number of atomic laboratories in the east and southwest, he said. It controls the flow of air over laboratory benches at velocities of 100 ft. a minute, or about as fast as smoke curls up from the end of a cigarette.

The purpose of the traveling show is to demonstrate the latest electronic, electric, and pneumatic control systems recently developed and now in production, Haines said. Included in the "Parade of Progress"

are heating, ventilating, and air conditioning controls for factories, office buildings, schools, and public buildings.

Also shown are specialized control systems for railroad passenger cars, streetcars, buses, ships, and airplanes. Industrial instruments as applied to commercial heating and air conditioning and micro switching devices also are included in the program.

All of the displays and instruments are working models so that guests attending the show can see the controls in actual operation. The entire project involves 250 lineal feet of space and includes its own generating equipment for the electronic controls and air compressors for the pneumatic devices. The show travels from city to city in a special truck-trailer 43 ft. in length.

The "Parade of Progress," Haines said, was designed for the professional trade, including architects, heating and ventilating engineers, contractors, school and hospital administrators, and railroad operating technicians. All interested persons will be able to see the show when it reaches their cities and will be notified in advance.

Among the 38 controls shown in Honeywell's new electronic humidity controller which is, by measurement, 100 times more sensitive than previous humidity controlling devices. Also included is the new modulating weatherstat, electronic control systems for air conditioning, and radiant panel heating controls.

Of particular interest to architects and heating contractors are the newly developed zone controls and the company's electronic Moduflow system. A pneumatic automatic reset controller, which has just gone into production, is another feature.



This view of the main dining room in the Little Shrimp Restaurant shows one 5-ton Typhoon packaged air conditioner behind the cashier's desk. Grilles deflect conditioned air toward diners.

Cool Little Shrimp

Manhattan Seafood Eatery Finds Business Picks Up 35% After Air Conditioning Is Installed

NEW YORK CITY—"Our annual average increase in volume was approximately 35% after the installation of air conditioning in 1946," Lou Hartman, manager of the Little Shrimp restaurant here, asserted recently.

"The Little Shrimp was definitely falling down before it was air conditioned; afterwards it soon regained its competitive position in the neighborhood and has not failed to show a good profit since," Hartman declared.

The Little Shrimp, located in the Chelsea hotel on West 23rd St. in Manhattan, is cooled by five self-contained packaged Typhoon air conditioners. Three five-ton and two three-ton units are used.

Use of packaged air conditioners was deemed necessary because the restaurant consists of five separate areas, all with varying heat loads and other characteristics.

Cooling had to be provided for a large combination bar and dining room, a cocktail lounge, two private dining rooms, and an office. Occupancy of these areas varies, naturally, with the time of day and with the season.

The office is used only during certain hours, the private dining rooms are at the whim of private parties, and the cocktail lounge fills up with patrons only during certain periods in the evening.

The use of self-contained units sets up a zone control in each area. No matter what heat load factors are encountered in any one of the zones covered, the unit in that area operates independently. Each is regulated by its own thermostat which is controlled by the return air from the same area.

Thus, any number of rooms can be in use or vacant at one time and the system will automatically cool only where needed. This means even distribution of cooled air at all times.

Hartman pointed out that the cost of the entire system, including installation, came to approximately \$7,300, or about \$350 per ton. Charges for water and electricity come to about \$9 per day for a season of 100 days, or a total of \$900 per season.

"As far as I'm concerned," Hartman asserted, "I wouldn't try to run a restaurant without air conditioning, especially in a place where there are a lot of other air conditioned restaurants."

"Customers are not the only ones influenced by air conditioning. I am around the restaurant most of the

day and it means a lot to me to be able to work in comfort.

"I know lots of restaurants where they have trouble holding on to employees. Many waiters quit in the middle of the busy summer season just because they can't stand the combination of hard work and intense heat."

"Then, too, there's the problem of dirt. The filtered air that comes through the air conditioning units will cut street dust and other types of city dirt down to practically nothing."

"Judging from last year's business, we can expect to turn over our 400 seating capacity four or five times daily during the heat of the summer."

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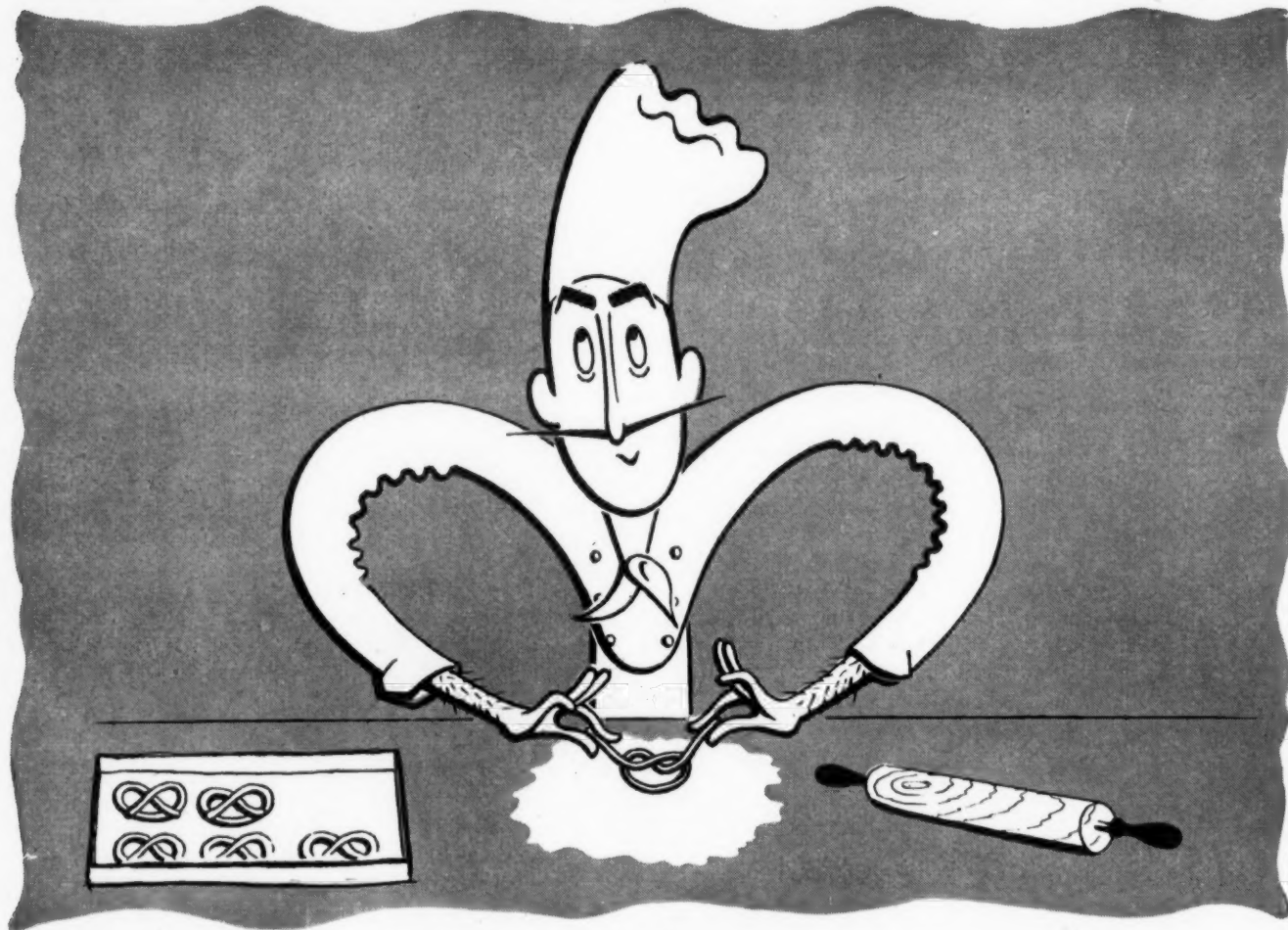
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Servicing the New Philco Room Air Conditioners

PART 5 Pointers on Servicing Refrigeration Circuit

SUPER POWER SYSTEM

All 1950 model Philco air conditioners incorporate a completely hermetically sealed refrigerating system. This system includes the assembly of the motor-compressor, the evaporator, the condenser, and all refrigerant-containing parts. Maximum efficiency of the Super Power system depends upon the proper functioning of both the electrical and air-flow systems. Trouble in either of these systems should be corrected prior to making any performance checks to determine the operating efficiency of the refrigerating system.

CHECKING SUPER POWER SYSTEM

All necessary tests can be made by using the Philco refrigeration tester, a Philco pocket psychrometer, and Philco pocket thermometer. Before making performance tests, check for the following conditions:

1. Dirty or clogged air filter, causing loss of ventilation and cooling effect.
2. Dirty screens in the air-path circuits.
3. Dirt-encrusted fan blades.

4. Dirty condenser, causing loss of refrigerating effect, high wattage reading and, in the water-cooled models, excessive water consumption.

Dust and lint may collect and build up on these parts, so that the air path is restricted. In water-cooled models, the condenser tubing may become encrusted with carbonates, slime, and sediment, from the local water supply. These restrictions will reduce the amount of refrigeration the sealed system is capable of producing.

CLEANING THE SYSTEM

A dirty filter should be replaced with a new one. Fan blades can be cleaned by the use of a stiff-bristle brush dipped in cleaning fluid. Dust and lint may also be brushed out of the outside air screens. The air-cooled condensers may be cleaned with a portable blower or the blower attachment from a household vacuum.

cleaner. The cleaning air stream should preferably be directed into the condenser in the opposite direction to the normal air stream set up by the fan.

CLEANING WATER-COOLED CONDENSERS

If an untreated water supply is used for cooling the condensers, slime may accumulate in the condenser coils. This may be removed by using a solution of 1 oz. of Oakite #22 to 1 quart of water.

In the event that the water supply is rather hard, there probably will be a concentration of carbonates or other scale in the condenser coils after a season's operation. This may be removed by using a solution of 1 part of Oakite #32 to 9 parts of cold water. It is recommended that Oakite #22 first be poured into the condensers, and allowed to stand for at least ½ hour. This should then be drained, and the condensers flushed with clear water.

The condensers should then be filled with Oakite #32 solution. This should be permitted to stand for two hours, after which the condensers should be drained and flushed with clear water. Finally, they should again be filled with a solution of Oakite #22, which will neutralize any acid remaining from the application of Oakite #32. These products are available throughout the country from local Oakite warehouses or from Oakite Products, Inc., 22 Thames, New York 6, N. Y.

If, after checking the performance tables, it is determined that excessive water consumption and excessive power consumption are not the result of an improperly adjusted automatic water-regulating valve, the condensers should be cleaned, using the following procedure:

1. Remove the front panel by pulling outward on the top of each side. Remove the top-panel mounting screws from each side at the rear. Take out the top-panel mounting screws on each side at the front. Remove the power switch nut, and lift off the entire top panel.

2. Shut off the water supply to the air conditioner.

3. Remove the plugs from the bottom of the condensers, to drain all water from the cooling system. Replace the drain plugs. See Fig. 5.

4. Break the connection from the water valve exit which goes to the bottom of the condenser.

5. Add a piece of copper tubing, extending above the top of the condenser, and incorporate an improvised funnel attachment. See Fig. 5.

6. Pour in approximately 1 pint of Oakite #22, mixed as explained previously. Permit the solution to remain in the condenser for at least ½ hour.

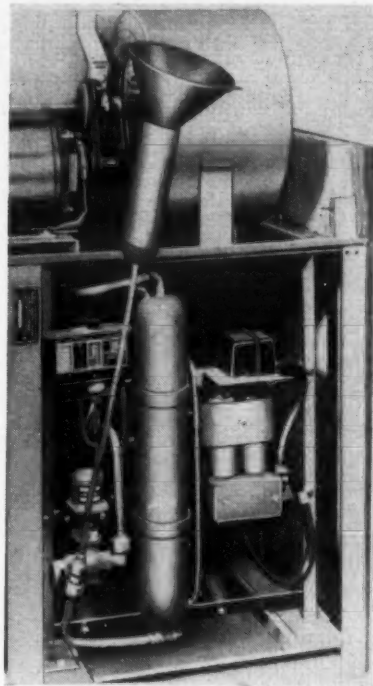


Fig. 5 shows setup for removing scale or other deposits from inside of water-cooled condenser with Oakite solution.

7. Remove the funnel adapter and funnel, and attach it to the second condenser. Repeat step 6.

8. Drain one condenser at a time, by removing the drain plugs and permitting the solution to flow into a flat, shallow pan.

9. After the Oakite #22 solution has been drained from the condensers, they should be flushed with clear water.

10. Pour the Oakite #32 solution, mixed as explained above, into each condenser. This should be permitted to remain in the condenser for approximately 2 hours.

11. After draining the Oakite #32 solution, the condensers should be neutralized by using Oakite #22 solution, as explained in step 6.

12. Before reconnecting the condenser tubing to the water-regulating valve, flush out the condensers with clear water, and replace the drain plugs.

DRY-BULB AND WET-BULB THERMOMETERS

The amount of moisture in the air is an important factor affecting the performance of any air conditioner. Accurate checks for operating efficiency require the use of both dry-bulb and wet-bulb thermometers.

The dry-bulb thermometer, a conventional glass-and-liquid type of instrument, is used to measure the concentration, or intensity, of heat in a substance. The wet-bulb thermometer is the same type of instrument, with a moistened, tubular wick covering the bulb. An instrument combining a wet-bulb and a dry-bulb thermometer is called a psychrometer.

In comparison with a dry-bulb thermometer, a wet-bulb thermometer gives a depressed (lower) reading, in proportion to the rate at which moisture is evaporated from the surface of the wet wick covering the bulb. The relationship between the readings of the two thermometers indicates the amount of water vapor in the air.

Before readings are taken, the wick-covered bulb must be thoroughly wet with clean water, preferably distilled. It is important to use a clean wick—replace it as soon as it shows signs of becoming dirty from handling or from other causes. When replacing the wick, tie it with a strong thread, above and below the thermometer bulb. The wick should be a snug fit on the bulb.

(To Be Continued)

Every One in the Industry
Should READ



ONE FOOT IN THE DOOR

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GEORGE F. TAUBENECK

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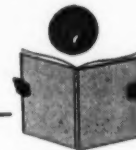
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CHAPTER TITLES from "One Foot In the Door"

- | | |
|---|--|
| 1. "This Is a Funny Book" | 12. "It Pays for Itself" |
| 2. The Old Master—and How He Got That Way | 13. Ask the Man Who Uses One |
| 3. Making Direct-Mail Advertising Respectable | 14. Everybody Loves a Convention |
| 4. Hair Grows on a Billiard Ball | 15. Sales Training Schools Must Be Clever and Entertaining |
| 5. Publicity Isn't Always Free | 16. Circuit Riding Becomes a Profession |
| 6. People See Better Than They Hear | 17. Make It Clear, Make It Simple, Make It Direct |
| 7. How to Humanize Your Company | 18. Just a Minute, Dear |
| 8. Tom Thumb Cartels | 19. Five Will Get You Ten |
| 9. Finding the Rainbow's Pot-of-Gold | 20. Mama Can Help, Too |
| 10. There's Always One Best Way to Tell Your Story | 21. Ask the Man Who Does the Work |
| 11. You Can't Get Off First Base Without a Sales Manual | 22. Factory Open House Policy |
| | 23. Who Says You Can't Sell Abroad? |
| | 24. "Tell All" Promotion Rings the Bell |

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... Lists all refrigeration manufacturers, trade names, and the Ranco Replacement Control code number. Copies available only through Ranco wholesalers.

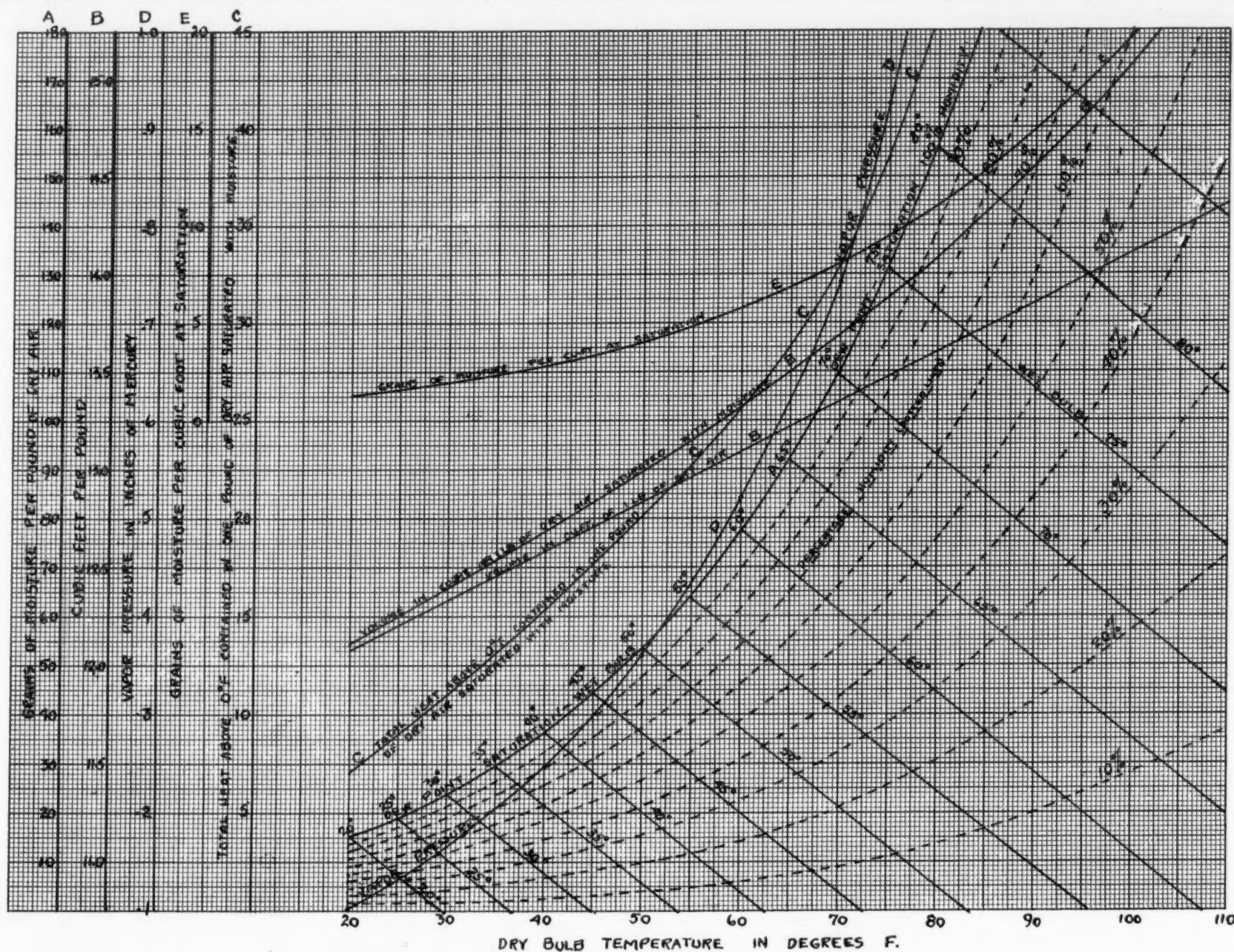


Fig. 3—Temperature-pressure chart with both dry bulb and wet bulb temperatures.

Refrigeration Problems And Their Solution

By Paul Reed

For Service and Installation Engineers



Paul Reed

Air and Humidity (8)

In the past few instalments, we have studied mixtures of dry air and water vapor which together we call atmospheric air, or sometimes just air. We have seen how some of the moisture in the mixture can be condensed out if the temperature drops to the temperature corresponding to the boiling point of the water at the vapor pressure existing at the time.

We found that air and water vapor mixtures have definite volumes and contain definite amounts of water in

them, both of which can be calculated if we merely know the temperature conditions.

So far we have discussed these mixtures of dry air and water vapor on a basis of their actual temperatures (Dry Bulb temperature); the volumes (Specific Volume); the amount of moisture these volumes could hold (Absolute Humidity) and what per cent of this amount they actually hold (Relative Humidity); the water vapor pressures in the mixture (Vapor Pressure); and the temperatures to which the mixtures would have to be cooled in order for the water vapor to start condensing out (Saturation Temperature or Dewpoint temperature).

AMOUNT OF HEAT IN AIR

However, we have said nothing about the amount of heat in these mixtures, nor how much heat must be added to warm these mixtures, or must be removed to cool them.

Again, it must be emphasized that we are talking about mixtures of two entirely different things, air and water vapor. They exist together in the same space but must be considered separately. If we warm (add heat to) the space occupied by the

air and water vapor mixture, we warm both of them, but at different rates, for they are different materials.

This can best be explained by an example of a pound of dry air, with which is mixed .0092 lbs. (or 64.4 grains) of water vapor. The temperature of the mixture is 70°, and if we look in the tables or on the psychrometric chart, we find that the volume occupied by such a mixture is 13.7 cu. ft. Also in the tables, we find that such a space could hold .01578 lbs. of 110.4 grains of water vapor. Therefore, each cubic foot could hold 110.4 ÷ 13.7 or 8.04 grains. The steam tables show that 8.04 grains per cubic foot corresponds to 55°, so 55° is the saturation or dewpoint temperature. The vapor pressure corresponding to 55° is .44 inches of mercury.

The vapor pressure corresponding to 70° is .74 inches of mercury, so .44 ÷ .74 is just under 60% r.h. Since we are talking of atmospheric air (the mixture of air and water vapor) at 29.92 inches of mercury, the pressure of the air only is 29.92 minus .44 or 29.48 inches of mercury.

All this we can determine just from the original knowledge of the temperature of the mixture and how much moisture it had in it. Or if, instead of knowing the amount of moisture, we had tested the air mixture and found by that test that the dewpoint temperature was 55°, we could have also determined all these things, including how much moisture there was in the mixture.

So we have one pound of dry air, and we have .0092 lbs. or 64.4 grains of water, all at 70°. If we add heat, we raise the temperature, but we still keep the same weight of air and water. If we remove heat, we cool the mixture to a lower temperature, and again we still have the same weight of air and water, provided that we do not cool it below 55°.

If we cool it below 55° (the dewpoint temperature), some of the water vapor condenses out of the mixture and we will no longer have

as much water vapor by weight as before. What is left will still fill the space, but there will not be as much of it by weight.

Let us see how much heat we must add to warm this mixture of one pound of dry air and .0092 lbs. of moisture, 15° let us say, from 70° to 85°, or conversely, how much heat we would have to remove to

cool this same mixture 15° from 70° to 55°.

SENSIBLE HEAT ABOVE THE DEWPOINT

We know that it takes one B.t.u. to warm one pound of water one degree; but we have only .0092 lbs. of water; so it will take only .0092 B.t.u. to warm it one degree. To warm it 15°, from 70° to 85° will therefore require the addition of 15 × .0092 or .138 B.t.u. Also, to cool this water vapor from 70° to 55° requires removal of .138 B.t.u.

The specific heat of air is about .243; that is, it requires only about one fourth as much heat to warm a pound of air 1° as to warm a pound of water 1°. So to warm this pound of air from 70° to 85° will require 15 × .243, or 3.645 B.t.u., which is also the amount of heat that we would have to remove to cool one pound of dry air from 70° to 55°.

The total amount of heat that we must add to warm the mixture of one pound of dry air and .0092 lbs. of water vapor from 70° to 85° is therefore 3.645 + .138, or about 3.783 B.t.u. From this, we see that as long as we are warming or cooling air and water vapor mixtures without condensing out any of the vapor, the heat involved is mostly because of the air itself; the amount of water vapor present is so small that it makes very little difference.

As long as we stay above the dewpoint temperature (where condensation starts), the heat to be added to warm the mixture or removed to cool it, is *sensible heat*; heat that can be detected by our sense of feeling as causing the air and water vapor mixture to become warmer or cooler. The total sensible heat amounts to about one fourth of a B.t.u. per pound per degree.

We have now cooled our pound of dry air with which is mixed .0092 lbs. of water vapor, down from 70° to 55°, and in doing so have removed 3.783 B.t.u. We have cooled the 13.7 cu. ft. of air starting at 70° and at 60% r.h., down to the dewpoint of 55°, and 100% r.h., and in doing so have removed 3.783 B.t.u. of sensible heat.

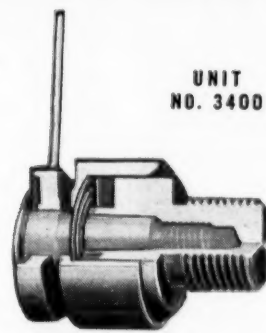
(To Be Continued)

S. C. Dept. Store Gets Cooling

CHARLESTON, S. C.—The Belk-Robinson Co.'s department store at 232 King St., is air conditioned.

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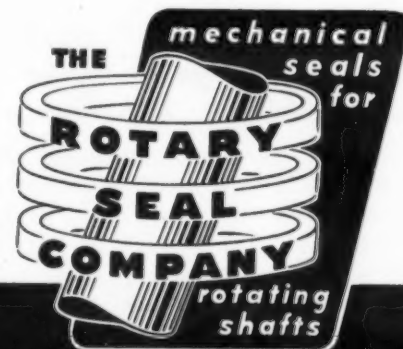


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N. STYLES BRIDGES of New Hampshire addressing the joint Rema-Rewa meeting at White Sulphur Springs, W. Va. Sen. Bridges spoke on "America's Choice Today." With him on the platform are (l. to r.) E. C. Marsden, Marsden & Wasserman, Inc., Hartford, Conn., retiring president of Rewa; R. H. Israel, Virginia Smelting Co., president of Rema; and J. S. Kimmel, Republic Electric Co., Davenport, Iowa, who also spoke at the meeting.

Rema-Rewa Review Supply, Taxes--

(Concluded from Page 1, Column 4) Proper interpretation of the application of this tax is of vital concern to both manufacturers and wholesalers of components, because the tax law could be so applied as to put a tax on all fractional horsepower condensing units, compressors, evaporators, and controls going out to the field.

R. H. Israel of Virginia Smelting Co., president of Rema, spoke on "The Value of Association Membership," (to be covered later) and also gave a brief report on the increase in Rema membership.

New members who have taken membership in Rema in the past 10 months include: United States Air Conditioning Corp.; The Baltimore Air Coil Co.; The Ajax Corp. of America; Revco, Inc.; A. J. Phillips & Co.; Stanley & Co.; Paragon Electric Co.; The Redmond Co.; Imperial Electric Co.; The Ready-Power Co.; Kenmore Machine Products Co.

The joint meeting was fortunate in hearing two gifted speakers discuss the situation in which the people of this country find themselves today, and some courses of action that might solve some of the dilemmas facing them. These speakers were Senator Styles Bridges of New Hampshire, and one from the industry itself, J. S. Kimmel of the Republic Electric Co., Davenport, Iowa.

These were the highlights of Sen. Bridges' talk:

1. Government spending.

In 1933 the total income of the state of Pennsylvania would have operated the Federal budget. In 1938 Federal expenses would have been the equivalent of the total income of the states of Pennsylvania and Missouri. But in 1951 Federal expenditures will equal the total income of 28 States.

2. Waste in Federal expenditures.

The Federal government recently spent \$100,000 to find out what men wear to bed. Reporting that the survey found out that 53% wear pajamas, Sen. Bridges commented that "next, they will spend another \$100,000 to find out what the other 47% did or didn't wear to bed."

Next, there is the story of the study of cats by three U. S. government administrative departments. First, the Department of Agriculture came out with a pamphlet lauding the domestic cat as a very valuable animal. Second, the Department of Commerce followed this up with a bulletin proclaiming that maybe a "National Cat Week" should be celebrated. Third, The Department of Interior then, however, came out with a bulletin declaring cats to be a menace and offered a pamphlet on "How to Control Vagrant Cats." This hilarious piece should be commented on only in such a place as "Inside Dope," and you'll probably find it there in later issues.

3. Controlling government expenditures.

This is difficult, the senator from

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New Hampshire explained, because of the log-rolling tactics employed by those who have a vested interest in government jobs.

For example, when a U. S. Customs department appropriation was cut 9%, a high official responded by firing 80% of the field force. Immediately thereafter Bridges (as chairman of the appropriations committee) received a total of 5,283 telegrams protesting the action. He took the trouble to trace every one of them down, and found that only a few had actually been sent by the individuals whose names were signed to the wires.

4. The United States in relationship to the rest of the World.

We can't dodge the moral responsibility that rests on our shoulders to help the rest of the world towards a peaceful, prosperous existence, Bridges said, but we must make certain that we do it the right way. We must first keep our own country morally and physically strong.

When all the many treaties and peace pacts that followed the end of World War I failed to stop aggressor nations, America again had to step into the breach with its physical strength, and the fact that American production was able to supply 45% of all the war materials used by its allies in addition to all of its own was the one thing that saved the day, Bridges reminded his listeners.

In his talk Kimmel said that "businessmen insure everything but a continuation of the right kind of political climate." Failure to pay attention to the political climate could someday "cost them the privilege of living in the greatest country this world has ever seen."

The reply of businessmen "what can we do" is no answer, Kimmel declared.

"All of you have some influence with somebody," he said. "Use it on your employees, your local public officials, your friends, your congressmen."

"Businessmen must serve the altar of their country as well as the altar of their God, their family, and their business, or they stand to lose everything they and our forefathers have built," Kimmel warned.

Commercial Firm Names Revell

BILOXI, Miss.—McDaniel's Refrigeration Sales & Service has announced the appointment of H. M. Revell, Sr., as sales manager of its commercial refrigeration department.

Revell has had 25 years' experience in sale of commercial refrigeration, and at one time was with several Frigidaire factory branches.

Government Contracts

PROCUREMENT INFORMATION

Individuals and companies who are interested in bidding may obtain complete bid sets containing more detailed data including specification, packing, delivery, and other requirements by a written request to the issuing office. Such requests should cite the description, applicable invitation number, or other reference and the opening date, etc.

DEPARTMENT OF DEFENSE

It is not necessary to refer solely to the issuing office for additional data on a bid invitation issued by any of the following ordnance districts, arsenals or armories. Complete information can be obtained by written request or personal call on the ordnance district office nearest you—its address is on file in your nearest Department of Commerce field office.

Description	Quantity	Invitation No.	Opening Date
Chicago QM Depot, QM Purchasing Division, Chicago, Illinois			
Coffee Maker, Glass, 3 Burner		950	27 Nov 50
Range, Single Deck, 36 Cup Cap			
Elec. 1.8 Kw., 110 V., 1 Ph.	10 ea	950	27 Nov 50
Manufactured Gas	10 ea	950	27 Nov 50
Natural Gas	10 ea	950	27 Nov 50
Toaster, Electric, Pop-Up	25 ea	950	27 Nov 50
Type 4 Slice, 110 Volt, AC-DC			

CO, Armed Services Medical Procurement Agency, Brooklyn, N. Y.			
Refrigerator, Laboratory	1	571	21 Nov 50
Aviation Supply Office, 700 Robbins Ave., Philadelphia, Pa.			
Gas Ammonia Low Pressure	263,500 lbs.	Z-52562	20 Nov 50
Liquefied Cylinder Spec. O-A			

Aviation Supply Office, 700 Robbins Ave., Philadelphia, Pa.			
Gas Methyl Chloride	20,430 lbs	Z52564	22 Nov 50
Low Pressure Liquefied Spec. to be In Accord With Commercial Grade			

Chicago QM Depot, QM Purchasing Division, Chicago, Ill.			
Machine, Meat and Food Chopper	1046		24 Nov 50
Hand Operated			
Large Size 8	300 ea		
Small Size 5	500 ea		

Commanding Officer, Frankford Arsenal, Philadelphia, Pa.			
Procurement Office			
Compressor, Air	1 ea	ORD-36-0 38-51-330	27 Nov 50
Conditioning			

GENERAL SERVICE ADMINISTRATION

Description	Quantity	Reference	App. Bid Date
Chief, Administrative Services Section, Public Buildings Service, General Services Administration, 902 U. S. Custom House and Appraisers Stores, Philadelphia 6, Pa.			
Refrigeration Unit, Water	1 ea	1288	11-15-50
Cooled, 115/230 Volts, A.C.M			
1 Ph., 60 Cycle			

Chief, Purchase Division, Federal Supply Service, General Services Administration, 2400 Fourth Ave., South, Seattle 4, Wash.			
Electric Fans, 12 and 16"	35 ea	2-1893-1	11-8-50

Chief, Supply Section, Public Buildings Service, General Services Administration, Washington 25, D. C.			
Fans, Elec., Blower Type	2 ea	476	11-20-50
Fan, Exhaust, W/Shutter	1 ea	476	11-20-50

Chief, Administrative Services Section, Public Buildings Service, General Services Administration, 902 U. S. Custom House and Appraisers Stores, Philadelphia 6, Pa.			
Refrigeration Unit, Water	1 ea	1288	11-15-50
Cooled, 115/230 Volts, A.C.M			
1 Ph., 60 Cycle			

Chief, Supply Section, Public Buildings Service, Room 819, 1114 Commerce St., Dallas, Texas			
Retubing Heating Boiler NR 2		C & R-97	11-21-50
Etc., U. S. Post Office and Court House, Abilene, Texas			

Chief, Supply Section, Public Buildings Service, General Services Administration, Washington 25, D. C.			
Salvador, Pre-Wash Unit	1 ea	484	11-27-50
Dishwashing Machine	1 ea	484	11-27-50
Vegetable Steamer	1 ea	483	11-27-50
Food-Mixing Machine	1 ea	483	11-27-50
Vegetable Slicer	1 ea	483	11-27-50
Elec. Roll Warmer	1 ea	482	11-27-50
Elec. Slicing Machine	1 ea	482	11-27-50
Gas Range, Hotel Type	2 ea	481	11-24-50

Alter Co. Won't Profiteer On Dual Prices Caused By Tax on TV, Freezers

CHICAGO—The Harry Alter Co. will not attempt to "profiteer" on the increase in prices on home freezers and television sets occasioned by the new 10% manufacturer's excise tax, the distributorship informed its dealers recently.

"Our policy is to sell every TV set in our present stock on which no 10% tax was paid at our old price. We won't profiteer," the Crosley distributor stated.

He added, "It is an obvious fact that no 10% excise tax was paid on a single TV set now in the inventory of either the dealer or distributor."

"It is also apparent that if the price on such sets now in our stock or your stock were 'jacked-up,' it would be a clear-cut case of profiteering."

Alter recommended that Crosley dealers follow his lead. He said that new prices that include the new 10% excise tax will be in effect only on

TV sets shipped from the factory after Nov. 1.

"In order to avoid confusion during the period when sets will be sold at both new and old prices, we are holding up all co-op TV advertising allowances and asking all dealers to hold up all TV advertising until the situation is stabilized."

Dunphy, Newton Elected Vice Presidents of Acme

JACKSON, Mich.—At a recent meeting of the board of directors of Acme Industries, Inc., E. B. Dunphy and A. B. Newton were named as vice presidents of the company.

Before joining Acme in 1938, Dunphy was associated with General Electric Co. During his service with Acme, Dunphy has been in various administrative and managerial posts and was sales manager from 1942 to 1948.

Newton has been associated with the refrigeration and air conditioning industries for many years and has served in sales and engineering capacities with York Corp., Minnea-

polis-Honeywell, and Chrysler Airtemp prior to joining Acme Industries.

The officers of the company now consist of the following: K. A. Weatherwax, president; C. E. Weatherwax, vice president; G. L. Baldwin, vice president; E. B. Dunphy, vice president; A. B. Newton, vice president; L. A. Gerber, secretary-treasurer; and P. A. Weatherwax, assistant secretary-treasurer.

G. W. Jarden Is Chicago Branch Mgr. for Maytag

CHICAGO—Appointment of George W. Jarden as Chicago branch manager of the Maytag Co. with supervision over the dozen regional managers operating in Illinois and surrounding states, was reported here.

Jarden was formerly a Maytag regional manager in Allentown, Pa. Since J. A. Anderson resigned last January as Chicago branch manager, W. H. Spellman, manager of sales and order departments at the Maytag home office in Newton, Iowa, has been acting as Chicago branch manager.

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- ✓ Streamline heavily insulated all steel cabinets.
- ✓ Stainless steel Lift-A-Way doors with roller bearings—"No busted fingers."
- ✓ Flush bottle decappers.
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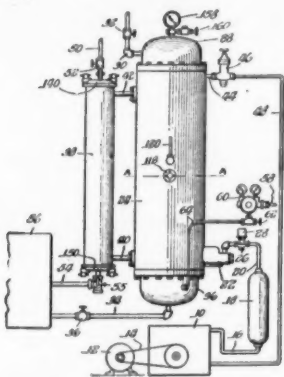
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PATENTS

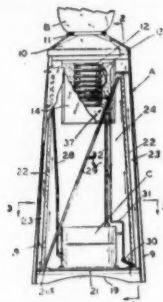
Week of May 30

2,509,243. COOLING APPARATUS FOR PLURALITY OF FLUIDS. Harry G. Mojonier, Oak Park, Ill., assignor to Mojonier Bros. Co., Chicago, Ill., a corporation of Illinois. Application Aug. 8, 1945, Serial No. 609,504. 11 Claims. (Cl. 62-141.)



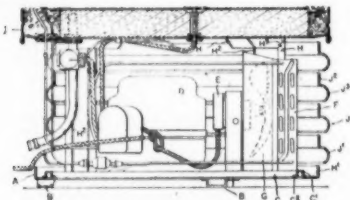
1. A cooling apparatus comprising a main cooler, an auxiliary cooler, means for supplying refrigerant to the main cooler, means for circulating the refrigerant through the main cooler, means for supplying a fluid medium to be cooled to the main cooler, means for supplying a fluid medium to be cooled to the auxiliary cooler, and means including the circulating means for the main cooler and unrestricted refrigerant connections between the main cooler and auxiliary cooler for effecting the circulation of refrigerant through the auxiliary cooler.

2,509,294. WATER COOLER. John Donald Fruen, Minneapolis, Minn. Application July 21, 1947, Serial No. 762,331. 3 Claims. (Cl. 62-141.)



1. In a water cooling stand a casing forming an enclosure having an air inlet at its lower portion and an air outlet at its upper portion, an upwardly extending panel spaced from one wall of said casing to divide the interior of the casing into a main chamber and a flue, said main chamber and flue having communication at their lower ends with said air inlet and having communication at their upper ends with said air outlet, a refrigerant condensing coil mounted in said flue, said upwardly extending panel and the wall of the casing from which it is spaced tapering upwardly from their lower ends to give said flue a truncated wedge-shaped form for increasing the rapidity of flow of air at the upper portion of the flue and assisting in producing a flow of air through said main chamber.

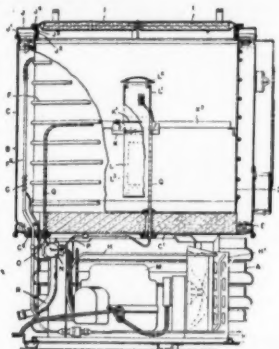
2,509,403. REFRIGERATOR CABINET BASE STRUCTURE. Harland W. Whitmore, Kenosha, Wis., assignor to Motor Products Corp., Detroit, Mich., a corporation of New York. Application June 28, 1948, Serial No. 35,595. 3 Claims. (Cl. 62-116.)



1. A base structure for a refrigerator cabinet comprising an endless circular ring, a platform secured to and extending diametrically across said ring forming a support for a portion of the refrigerating apparatus, channel posts located at spaced points around said ring and extending upward therefrom, the lower ends of said posts being flanged and secured to said ring, and their upper ends being bent to form arms projecting radially inward and forming supports for the cabinet.

ward and forming supports for the cabinet.

2,509,404. THERMOSTATIC CONTROL MEANS FOR BOTTLE COOLERS. Harland W. Whitmore, Kenosha, Wis., assignor to Motor Products Corp., Detroit, Mich., a corporation of New York. Application June 28, 1948, Serial No. 35,599. 7 Claims. (Cl. 62-4.)



1. In a refrigerator, a cabinet having a storage chamber therewithin, intermittently operated refrigerating means connected to directly cool the wall of said cabinet surrounding said chamber, means responsive to a predetermined maximum temperature of said wall for starting said refrigerating means, means for circulating air within said chamber to pass upward centrally thereof and then radially outward to said wall, and means responsive to a predetermined minimum temperature of air centrally within said chamber for stopping said refrigerating means.

2,509,562. BEER COOLING EQUIPMENT. Patrick J. Foley, Jersey City, N. J. Application Sept. 11, 1946, Serial No. 696,243. 2 Claims. (Cl. 62-142.)



1. A beer cooling apparatus comprising a beer supply keg, a distributor pipe connected with the beer supply keg and extending vertically therefrom, a cooling container connected to the opposite end of the distributor pipe, a discharge pipe extending from the side of the cooling container, said cooling container being high and narrow and having curved sides accessible at all elevations to a cleaning tool when extended into one end of the container, the opposite end of the container from which the distributor pipe is connected having an opening for receiving a cleaning plug, the opening being in vertical alignment with the distributor pipe so that a cleaning tool can be extended through the cooling container and through the distributor pipe, said side walls of the container tapering respectively toward the distributor pipe and the plug ends of the container.

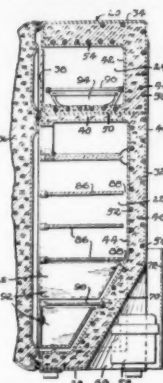
2,509,579. SOLID WATER ICE COMPOSITION FOR PACKING AND SHIPMENT OF FRUITS AND VEGETABLES. Jagan N. Sharma, Los Angeles, Calif. No. Drawing. Application May 11, 1946, Serial No. 669,096. 1 Claim. (Cl. 252-70.)

A solid water ice having a melting point not below 31° F. and having the ability to retain its form for appreciably longer periods of time than normal commercial ice, said ice containing between 0.0001% and 0.1% by weight of fluorescein.

2,509,591. REFRIGERATING APPARATUS. Whitney Giffard, Detroit, Mich., assignor to Nash-Kelvinator Corp., Detroit, Mich., a corporation of Maryland. Application Aug. 15, 1947, Serial No. 768,917. 4 Claims. (Cl. 62-116.)

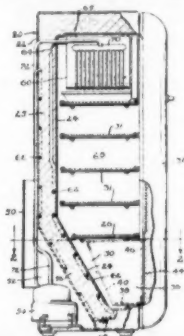
4. In a refrigerating apparatus, a cabinet having storage space extending substantially from top to bottom of said cabinet and having side and rear walls, a refrigerant evaporator arranged to absorb heat from at least a portion of said storage space, a conical rear wall portion intermediate said side walls forming a recess in

the rear of said cabinet, said conical wall portion being inclined between the front and rear walls of the cabinet projecting into the storage space, a refrigerant motor-compressor unit disposed part way into said recess, a refrigerant condenser operatively connected to said evaporator and to said motor-compressor unit, and a storage receptacle in said storage space having a conical recess complementary to said conical rear wall portion.



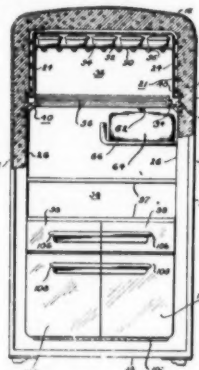
the rear of said cabinet, said conical wall portion being inclined between the front and rear walls of the cabinet projecting into the storage space, a refrigerant motor-compressor unit disposed part way into said recess, a refrigerant condenser operatively connected to said evaporator and to said motor-compressor unit, and a storage receptacle in said storage space having a conical recess complementary to said conical rear wall portion.

2,509,592. REFRIGERATING APPARATUS HAVING RECEPTACLE SECURED TO DOOR. Whitney Giffard, Detroit, Mich., assignor to Nash-Kelvinator Corp., Detroit, Mich., a corporation of Maryland. Application Aug. 15, 1947, Serial No. 768,918. 2 Claims. (Cl. 62-116.)



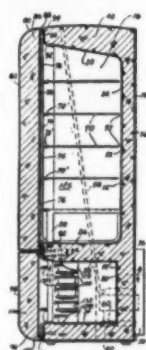
1. In refrigerating apparatus, a cabinet having a liner forming a food storage compartment and having a machinery compartment separated from the food storage compartment by an inclined rear wall, a refrigerant evaporator engaging the outer surface of said liner along said inclined wall to absorb heat from said liner, a motor-compressor unit in said machinery compartment operatively connected to said evaporator, a door closing an access opening in said food storage compartment hinged to one side of said cabinet, and a storage bin secured to the inner side of said door extending into said food storage compartment, said bin having an inclined rear wall positioning adjacent said first inclined wall.

2,509,610. REFRIGERATING APPARATUS. Lawrence A. Philipp, Detroit, Mich., assignor to Nash-Kelvinator Corp., Detroit, Mich., a corporation of Maryland. Application Jan. 5, 1946, Serial No. 639,204. 11 Claims. (Cl. 62-103.)



5. A domestic refrigerator comprising, a cabinet casing, vertically spaced shells within said casing forming storage space, a fitting between the vertically spaced shells, a plurality of spaced superimposed plates positioned on said fitting and dividing the storage space into freezing and food storage compartments, insulation between said casing and said shells, a receptacle in the food storage compartment, and communicating passageways interconnecting the freezing compartment and the space between the upper shell and the casing with the receptacle.

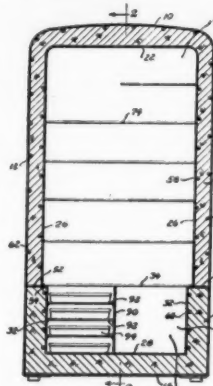
2,509,611. REFRIGERATING APPARATUS. Lawrence A. Philipp, Detroit, Mich., assignor to Nash-Kelvinator Corp., Detroit, Mich., a corporation of Maryland. Application Feb. 20, 1946, Serial No. 649,068. 10 Claims. (Cl. 62-99.)



3. A refrigerator comprising a cabinet having a thin sheet metal casing and having a vertically disposed front opening, an access door closing the vertically disposed opening, spaced shells dividing the space within the cabinet into upper and lower food storage and ice freezing compartments temperature breaks formed of non-conducting material interposed between the door and the spaced shells, inner access doors closing the ice freezing compartment, a motor compressor unit between the outer walls of the cabinet

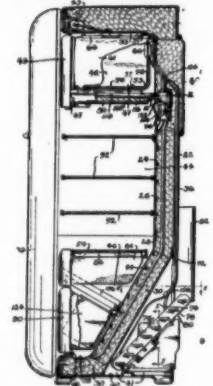
and the shell of the ice freezing compartment, refrigerant condenser passage in thermal connection with the walls of the cabinet, refrigerant evaporator passages in thermal connection with the walls of the inner shells, connecting means between the motor compressor unit and the refrigerant condenser and evaporator passages, a capillary tube connecting said condenser and one of said evaporators, and a fixed restriction between the refrigerant evaporator passages of the food storage and ice freezing passages to maintain the pressure of refrigerant in the ice freezing evaporator passages lower than the pressure in the food storage evaporator passages.

2,509,612. REFRIGERATING APPARATUS. Lawrence A. Philipp, Detroit, Mich., assignor to Nash-Kelvinator Corp., Detroit, Mich., a corporation of Maryland. Application Feb. 20, 1946, Serial No. 649,069. 8 Claims. (Cl. 62-99.)



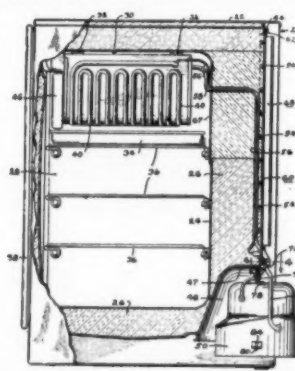
1. A refrigerator comprising a cabinet, a mechanism compartment in the bottom of the cabinet, insulation surrounding a partition of the mechanism compartment and forming walls of an ice freezing compartment in the lower portion of the cabinet, a food storage compartment in the upper portion of the cabinet, insulation surrounding walls of the food storage compartment, a baffle interposed between and separating the insulation surrounding the ice freezing and food storage compartments, and a sealing member aligned with the baffle and separating the ice freezing and food storage compartments.

2,509,613. TWO-TEMPERATURE REFRIGERATOR. Lawrence A. Philipp, Detroit, Mich., assignor to Nash-Kelvinator Corp., Detroit, Mich., a corporation of Maryland. Application Aug. 11, 1947, Serial No. 767,910. 12 Claims. (Cl. 62-103.)



1. Refrigerating apparatus comprising a cabinet having an outer metal casing, a metal liner forming walls of a storage compartment, insulation between said casing and said liner, said outer casing having vertical side walls and having an inclined lower back wall portion extending between and cooperating with said vertical side walls to provide a machinery compartment at the lower rear part of the cabinet of general triangular shape in cross section, a refrigerant evaporating element arranged to cool said storage compartment, a motor-compressor unit positioned in said machinery compartment and operatively connected to said refrigerant evaporating element, and a flat type refrigerant condenser positioned in said machinery compartment adjacent to said inclined back wall and being operatively connected to said motor-compressor unit and to said refrigerant evaporating element, said condenser being positioned on an incline with respect to said inclined wall with the lower portion of the condenser being closer to said inclined wall than the upper portion of said condenser.

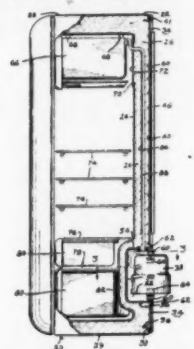
2,509,614. REFRIGERATING APPARATUS. Lawrence A. Philipp, Detroit, Mich., assignor to Nash-Kelvinator Corp., Detroit, Mich., a corporation of Maryland. Application Oct. 29, 1947, Serial No. 782,907. 10 Claims. (Cl. 62-116.)



3. In refrigerating apparatus, a cabinet, a concave-convex exterior wall cover member forming an inwardly directed recess in a wall of said cabinet, a removable panel cooperating with said wall cover member to form an exterior wall covering, a motor-compressor unit carried by said removable panel extending into said recess, said wall cover member and said removable panel forming a joint therebetween, and a seal closing and sealing said joint and carried by said removable panel.

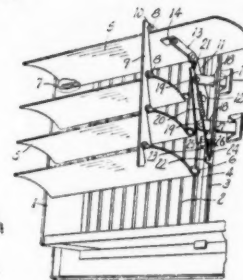
2,509,615. REFRIGERATING APPARATUS HAVING A REMOVABLE PANEL UNIT. Lawrence A. Philipp, Detroit, Mich., assignor to Nash-Kelvinator Corp.,

Detroit, Mich., a corporation of Maryland. Application Oct. 29, 1947, Serial No. 782,908. 6 Claims. (Cl. 62-116.)



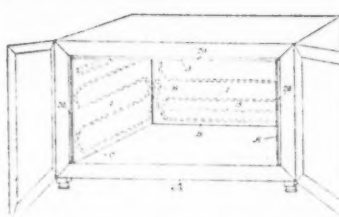
2. In refrigerating apparatus, a cabinet having a food storage compartment, a refrigerant evaporator arranged to absorb heat from said food storage compartment, a removable exterior panel in the cabinet having an inwardly disposed offset adjacent the bottom of said food storage compartment, a motor-compressor unit in said offset carried by said panel and being operatively connected to said evaporator, a condenser coil attached to the inner surface of said removable panel immediately above said motor-compressor unit and being operatively connected to said evaporator and to said motor-compressor unit, and a plurality of diametrically acting springs having their axes in the plane of said panel suspending said motor-compressor unit in said recess from said removable panel.

2,509,774. VALVE MECHANISM FOR AIR CONDITIONING REGISTERS. Robert L. Leigh, Coopersville, Mich., assignor to Air Control Products, Inc., Coopersville, Mich. Application July 19, 1947, Serial No. 762,095. 5 Claims. (Cl. 98-107.)



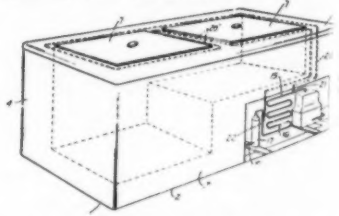
1. In a structure of the class described the combination with a supporting frame, of a grill provided with a mullion having a rearwardly projecting flange, a plurality of lower like valve members pivotally mounted at their forward edges, a link pivotally connecting said valve members for simultaneous operation, a lever pivotally mounted on the said flange of said mullion, a link connecting said lever to the inner side of one of said valve members, push buttons pivotally connected to said lever on opposite sides of its supporting pivot, said mullion defining openings through which said push buttons are disposed, a spring secured at one end to said mullion and at the other end to said lever adjacent its upper end and so that the spring swings across the lever pivot as the lever is actuated thereby actuating the lever with a snap action, and a lever stop mounted on said mullion for vertical adjustment to limit the valve closing movement of the lever.

2,509,779. COLD ELEMENT FOR DEMOUNTABLE REFRIGERATORS. Willard L. Morrison, Highland Park, Ill. Application Feb. 14, 1948, Serial No. 8,455. 1 Claim. (Cl. 62-126.)



A refrigeration element including a plurality of separate flat plates, refrigeration coils mounted on said plates and having connections extending from one plate to another, the connections extending diagonally with respect to the common edges of adjacent plates, a housing adapted to loosely enclose said plates and hold them at right angles to one another with the coils interposed between the inner wall of the housing and the outer walls of the plates, the plates being held in position only by their enclosure in the housing and by the tubes joining them.

2,509,784. CONDENSATION PREVENTING MEANS FOR REFRIGERATORS. John K. Roth, San Francisco, Calif. Application May 10, 1946, Serial No. 66,994. 2 Claims. (Cl. 62-116.)



1. A refrigerator comprising a cabinet made of insulating material and having sheet metal covering the said material, the cabinet having a door opening in the top thereof and a door for closing the same, with a rim of the door projecting over the rim of the door opening, a refrigerating circuit including a compressor, a condenser connected thereto and a receiver connected to the condenser, and a by-pass for the condenser leading around the door opening outside the door rim and in direct heat-exchange relation with the sheet metal covering whereby a portion of the compressed refrigerant is guided around the door opening to reduce the settling of moisture from outside air upon the metal covering.

(To Be Continued)

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11-13-50

9 Mos. Appliance Sales In Philadelphia Area

ELECTRIC REFRIGERATION SALES

Month	1950 Units Sold	1949 Units Sold	1948 Units Sold	1950% Inc. Or Decrease Over 1949	1950 Retail Value	1949 Retail Value	1950% Inc. Or Decrease Over 1949	1950 Average Price	1949 Average Price
January	7,433	5,861	5,760	+ 28%	\$ 1,965,959	\$ 1,687,986	+ 16%	\$265	\$287
February	10,607	6,539	5,554	+ 62%	2,907,177	1,911,608	+ 52%	274	292
March	11,894	7,131	7,426	+ 68%	3,280,477	2,094,911	+ 56%	275	293
April	13,347	6,622	8,259	+101%	3,632,345	1,817,923	+100%	272	274
May	15,051	7,925	8,072	+ 90%	4,152,796	2,150,815	+ 94%	277	271
June	12,668	8,569	8,177	+ 48%	3,379,029	2,282,667	+ 47%	268	266
July	14,571	9,246	7,981	+ 58%	4,057,475	2,591,887	+ 57%	279	280
August	13,386	9,103	7,785	+ 46%	3,642,606	2,480,931	+ 47%	272	272
September	11,614	7,228	7,267	+ 61%	3,264,389	1,958,626	+ 67%	280	270
Total	110,571	68,224	66,281	+ 62%	\$30,282,253	\$18,977,354	+ 60%	\$274	\$278

Report covers sales in Philadelphia, Bucks, Chester, Delaware, and Montgomery Counties. Report includes sales of the following makes: Admiral, Coldspot, Coolerator, Crosley-Shelvardor, Deepfreeze, Foster, Frigidaire, General Electric, Gibson, Hotpoint, International-Harvester, Kelvinator, Leonard, Norge, Philco, Universal, and Westinghouse.

HOME FREEZER SALES

Month	1950 Units Sold	1949 Units Sold	1950% Inc. Or Decrease Over 1949	1950 Retail Value	1949 Retail Value	1950% Inc. Or Decrease Over 1949	1950 Average Price	1949 Average Price
January	386	147	+162%	\$ 107,770	\$ 43,567	+147%	\$279	\$296
February	402	157	+156%	110,738	50,027	+121%	275	318
March	552	301	+ 83%	161,991	95,331	+ 69%	293	316
April	625	307	+103%	203,870	92,673	+110%	330	301
May	764	373	+102%	228,794	115,383	+ 99%	300	309
June	929	495	+ 88%	285,552	143,202	+100%	308	287
July	1,182	459	+158%	398,668	134,169	+196%	334	292
August	1,532	677	+127%	458,184	186,491	+146%	300	275
September	939	667	+ 40%	306,932	166,250	+ 85%	327	249
Total	7,311	3,583	+104%	\$2,262,499	\$1,127,093	+101%	\$310	\$286

Total sales from July 1 to Dec. 31, 1948 2,768
Total sales for 1949 5,170
Total sales for first nine months of 1950 7,311
Total 15,249

Note: This report covers sales of the following makes: Carrier, Coldspot, Coolerator, Crosley-Frostmaster, Deepfreeze, Frigidaire, General Electric, Gibson, Hotpoint, International-Harvester, Kelvinator, Leonard, Norge, Philco, Universal, Victor, Westinghouse, and Wilson Zero-Safe.

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Trane Sales Set Record For September Quarter

LA CROSSE, Wis.—Consolidated sales of The Trane Co. and its Canadian subsidiary, set a new record of \$7,588,380 during the three months ending Sept. 30. Sales of the air conditioning, heating, and ventilating equipment manufacturer for the same quarter of 1949 were \$5,844,336. Consolidated net income after taxes for the quarter was \$471,544, compared with \$495,273 in 1949.

ELECTRIC WATER HEATER SALES

Month	1950 Units Sold	Total Retail Value	Average Retail Price
January	457	\$ 60,113	\$131
February	533	69,927	131
March	781	91,287	116
April	920	130,411	142
May	930	132,676	142
June	1,120	156,744	140
July	1,707	211,814	124
August	1,272	146,493	115
September	836	106,662	127
Total	8,556	\$1,106,127	\$129

Note: This report covers sales of the following makes: Crosley, Deepfreeze, Frigidaire, General Electric, Hotpoint, Hydrohot, Kelvinator, Lectro-Host, Norge, Pemco, Pennsylvania, Sepco, Smithway-Permaglas, Universal Cooler, Westinghouse, and John Wood.

Freezer Volume Up 104%, Refrigerators Show 62% Increase

PHILADELPHIA — Home freezer sales in five metropolitan Philadelphia counties during the first nine months of 1950 were 104% ahead of the same period of 1949, the Electrical Association of Philadelphia announced recently. In fact, they were 41% ahead of the sales total for the entire year 1949.

The Electrical Association also reported that its members had sold 62% more electric domestic refrigerators during the first three quarters of 1950 than in the same period of 1949. No comparison was made with figures for the full year 1949.

The association noted, that while refrigerator sales by its members was increasing, sales of the Philadelphia Electric Co. had declined by 5%. A month by month breakdown of sales figures showed that in all of the four months from April through July the utility had been unable to meet its 1949 rate.

On the other hand, association members had topped their '49 figures in all of the nine months by substantial margins. Utility sales amounted to about 2.2% of total sales.

The association reported that its members had sold 8,556 electric water heaters valued at \$1,106,127 during the nine months. Average retail price was \$129. No comparisons were made with sales last year.

The water heater report covered sales of 16 brands. Other reports covered 17 brands of refrigerators and 18 brands of home freezers.

Refrigerator sales for the nine months totaled 110,571 units valued at \$30,282,253 or an average of \$274 each. This compared with 68,224 units valued at \$18,977,354, or an average of \$278 each in 1949.

Home freezer sales totaled 7,311 units as compared with 3,583 for the same period last year. Comparative total values were \$2,262,499 and \$1,127,093, respectively. Average retail price this year was \$310. Last year it was \$286.

Since July 1, 1948, 15,249 home freezers have been sold in this five-county territory. The counties are Philadelphia, Bucks, Chester, Delaware, and Montgomery.

C. E. Lindstrom Appointed Philco Western Sales Mgr. To Replace C. S. Bettinger

PHILADELPHIA — Clarence E. Lindstrom, who has been with Philco for 18 years and most recently was manager of distributor operations, has been named western sales manager with headquarters in San Francisco, John M. Otter, vice president and general sales manager of Philco Corp., has announced.

Lindstrom will replace Cliff S. Bettinger, who recently retired after 19 years as western sales manager handling sales of Philco products in 11 western states, Alaska, and Hawaii.

Joining the company in 1932, Lindstrom served as controller of Philco Distributors, Inc., Chicago, for several years and then became sales manager of this branch of the company's wholesale organization. In 1949 he became manager of distributor operations.

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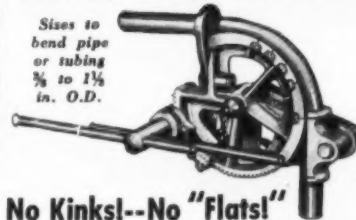


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EXECUTIVE SALES engineer desires to change present connection with nationally known manufacturer of commercial refrigeration equipment. Reason for change acceptable. Twenty years sales experience refrigeration. Well known by dealers twenty-six states. Now headquartering Ohio. Covering five states. Volume over half million. Will consider salary and bonus with traveling expenses yearly contract. Write BOX 3605, Air Conditioning & Refrigeration News.

PURCHASING AGENT, with 12 years manufacturing experience. Thorough knowledge raw materials, component parts household, commercial refrigerators, cabinets, freezers, air conditioning units, soda fountains. Excellent supply sources steel, copper, fittings, hundreds other items. Can head purchasing department well rated firm, manufacturer or distributor. Former employers nationally known. Locate New York City area. Age 33, married, presently employed. BOX 3606, Air Conditioning & Refrigeration News.

POSITIONS AVAILABLE

REFRIGERATION ENGINEER: Nationally known manufacturer located in Minnesota has opening for experienced engineer with ability to handle development and design of refrigeration systems for refrigerators and home freezers. Our employees know of this ad. BOX 3596, Air Conditioning & Refrigeration News.

EQUIPMENT WANTED

WANTED: ROLL-FORMING machine for refrigerator shells. Maximum roll width: 27 inches. State if rolls included, condition, make, and price. BOX 3599, Air Conditioning & Refrigeration News.

EQUIPMENT FOR SALE

WHOLESALE SEALED unit rebuilding. We will rebuild and convert your unit to "Freon-12." One year guarantee. Write for price list and shipping instructions. ADVANCE REFRIGERATION COMPANY, 829 East McNichols Road, Detroit 3, Mich.

NEW—PROMINENT brand floor-type unit cooler, Model FUA-875, complete with expansion valve, heat exchanger, hand valves, water defrost, and 1½ HP. 3 ph. blower motor and 6 row copper coil. Will operate satisfactorily on 5 or 7½ HP condensing unit. Either normal temp. or zero. Less than half of wholesale—\$300.00. Two—new space saver type. Ceiling mounted blower coils. Model 670 and 860. They will match a 1 horsepower and a 1½ horsepower air cooled condensing unit, respectively. Below distributor cost. \$200.00 for both. FOB San Antonio. HARPER MARTIN, 922 Schley, San Antonio, Texas.

BUSINESS OPPORTUNITIES

FOR SALE—Because of ill health will sell for inventory one of the largest store fixture and appliance businesses in Middle West. Located in Indiana. Our business last year grossed \$260,000.00 and we paid net income tax of \$18,837.63. This year of 1950 our gross will show \$350,000.00 and we should show net profit \$25,000.00 and be forced to pay tax on this figure. We operate six brand new trucks, have large four-story modern fireproof building under lease with 18,000 sq. ft. floor space. Modern elevator 18 ft. long lifts 8,000 lbs., makes the building the most ideal type for this kind of operation. We have the best lines to sell, the best sales and service organization in this part of the country. Will sell business for inventory only at invoice prices. If interested write BOX 3597, Air Conditioning & Refrigeration News.

FOR SALE: Commercial refrigeration business in northern New Jersey. Lines include store fixtures, air conditioning and allied equipment. Franchised by manufacturers of nationally advertised products. A going business established over 16 years. Priced for quick sale. BOX 3604, Air Conditioning & Refrigeration News.

MISCELLANEOUS

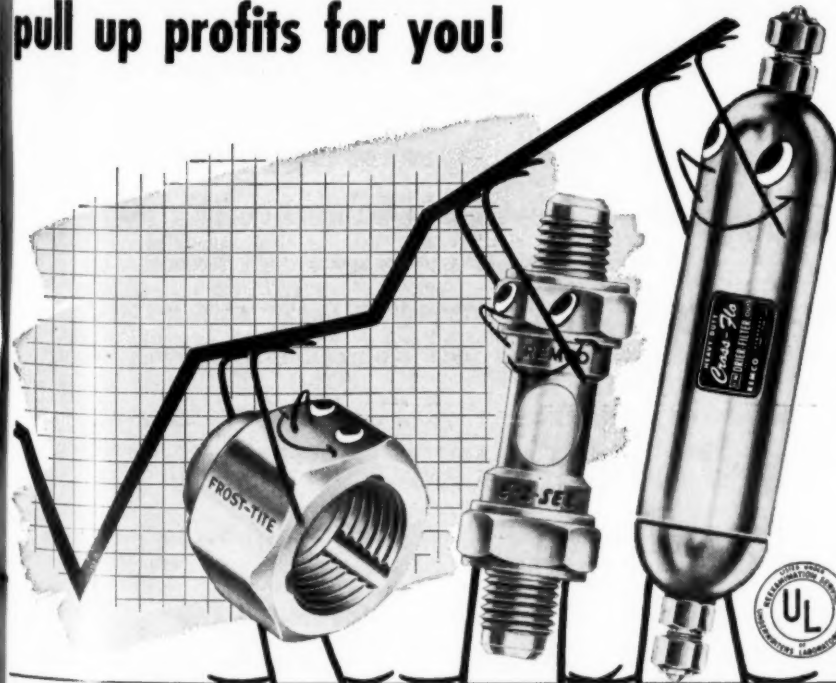
NORGE SEALED units remanufactured and exchanged. Immediate delivery from stock, 1 year guarantee. Write for prices and shipping instructions. Complete Norge engineering service, 22 years experience. MODERN REFRIGERATION CO., INC., 12541 E. McNichols Road, Detroit 5, Michigan.

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FROST-TITE eliminates losses from loosened and cracked flare nuts —

Frost-Tite flare nuts, forged frost-relief slots provide relief for expanding ice within the nut, and thus no force is created to cause loosening, splitting, or cracking. Cost no more than ordinary flare nuts—are ideal for use anywhere in the system.

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With E-Z-See, you are assured of the following definite advantages: (1) E-Z to see thru—both sides of the body are open to let in light (2) Positively leakproof—can't leak because springs automatically maintain just the right force to form a positive seal around the glass (3) Perfectly safe—glass is protected for safety at pressures up to 500 psi.

Cross-Flo eliminates losses from clogged driers and expansion valve freeze-ups —

Now with Molded DuCal Drierite as the drying agent, you get the highest-possible efficiency even at liquid temperatures up to 150°. You can now count on prevention of refrigerant control freeze-ups even in the lowest temperature installations.

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Program for RACCA--

(Concluded from Page 1, Column 2)

"M-Day"; manpower problems; and military procurement.

The program follows:

THURSDAY, NOV. 16

9 a.m.—Registration
12 noon—Luncheon for board of directors.

2 p.m.—Business meeting: Greetings by President Robert W. Noll; reports by officers, directors, and committees; nomination and election of directors for 1951.

7 p.m.—Dinner meeting sponsored by Refrigeration & Air Conditioning Contractors Association of Southern California (open to all refrigeration and air conditioning contractors, their friends and guests). Panel discussion by four men prominent in the industry in Southern California on "Price Chiseling, and What Can be Done About It," with a discussion period following.

FRIDAY, NOV. 17

Topic for day: "Mobilization Problems—A Day With Government."

9 a.m.—Registration
9:45 a.m.—Greetings from civic leaders.

10 a.m.—Inventories, priorities, and allocations. Policies and procedures currently in effect, or planned for the near future—Walter E. Elieson, U. S. Department of Commerce, Los Angeles.

10:45 a.m.—Price and wage controls. Current and contemplated regulations in this important field. Speaker—to be announced.

11:30 a.m.—Credit controls and regulations. An explanation of existing credit controls and officials' interpretations of them, particularly as they apply to refrigeration and air conditioning contractors—C. E. Potratz, Federal Reserve Bank of San Francisco.

12:30 p.m.—Luncheon session. Mobilizing for "M-Day"—Harry Blythe, Advisor to the Chairman, Munitions Board, and president of STD, Inc.

2 p.m.—Manpower Problems. Policies and requirements of both the military and civilian economy during the mobilization period. Speaker—to be announced.

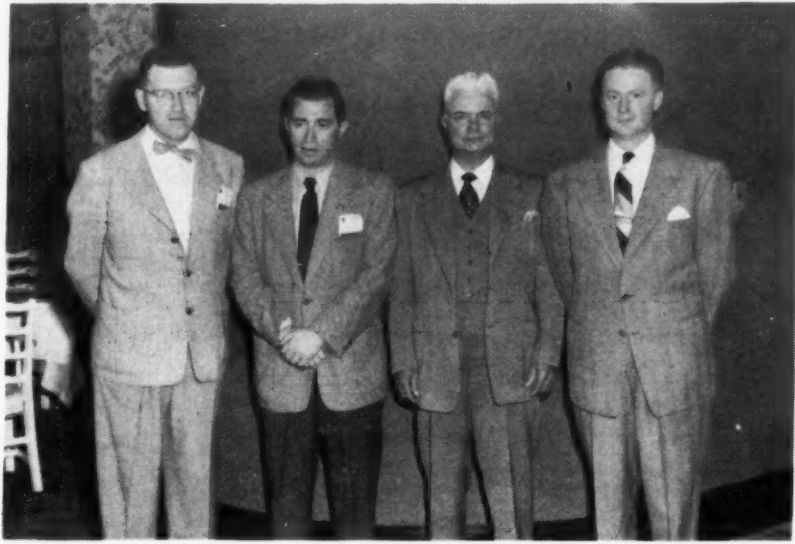
2:45 p.m.—Military Procurement. The needs and methods of procurement of the armed forces, present and future—Commander Philip F. Ashler, USN, chief, Small Business Office Munitions Board.

3:30 p.m.—Panel discussion and question and answer period, with all speakers of the day sitting as panel members.

4:15 p.m.—Summary of the day by chairman.

4:30 p.m.—Adjournment.

6:30 p.m.—Dinner meeting for newly-elected board of directors and election of officers for the coming year.



NEW OFFICERS of Refrigeration Equipment Wholesalers Association, elected at the group's recent meeting at White Sulphur Springs, W. Va. Left to right: Ned Mason, Mason Supply Co., Columbus, Ohio, treasurer; Ben Blazer, M. Blazer & Son, Passaic, N. J., secretary; Fred Wilson, Standard Brass & Mfg. Co., Beaumont, Texas, vice president; Jack Glass, Chase Supply Co., Chicago, president.

Rewa Officers Elected--

(Concluded from Page 1, Column 3)

cussion on this subject was prepared by Merle Stutzman and Lawrence Roth, west coast wholesalers, and a suggestion was also made that a study be conducted for one city, with wholesalers returning all freight bills to manufacturers for a more complete check as to whether the particular freight classification had been properly made.

As a further means of helping supplies wholesalers to operate more efficiently, F. V. Wilson, Standard Brass & Mfg. Co., which operates a number of wholesaler establishments in Texas, outlined a proposal for an extension of the "cost of business" survey which has been conducted among members of the association in the past few years.

On the matter of "shortages," items which involve the use of copper are a current cause of worry. "Freon-12" is still not overly plentiful, but there is no evidence of any actual suffering in the field because of lack of it.

Other national officers of Rewa elected during the meeting included vice president, F. V. Wilson, Standard Brass & Mfg. Co., Beaumont, Tex.; secretary, Benjamin V. Blazer, M. Blazer & Son, Passaic, N. J.; treasurer, N. K. Mason, Mason Supply Co., Columbus, Ohio.

New directors elected at the meeting included Blazer, for Region 2; R. E. Warwick, Plumbing Wholesale Co., Jackson, Miss., for Region 12; J. S. Kimmel, Republic Electric Co., Davenport, Iowa, for Region 7; Joe Wakefield, Wakefield Supply Co., Spokane, Wash.

Presiding at the meeting as retiring president of Rewa was E. C. Marsden, Marsden and Wasserman, Inc., Hartford, Conn.

Air Conditioning Slated for New Jacksonville Structure

JACKSONVILLE, Fla. — Arthur Perry, Inc., has the contract for construction of a new building at the corner of Forsyth and Pearl Sts. for the Bisbee-Baldwin Corp. The new structure, to cost approximately \$125,000, will be air conditioned throughout. It is scheduled to be completed around May 1, 1951, an announcement said.

engineer, has been appointed as manager of the household engineering department, succeeding Schweller. Succeeding Gibson as manager of the commercial refrigeration and air conditioning engineering department is M. W. Baker.

Announcement was also made of the transfer of R. J. Woxman, section engineer in charge of process specification activities, to Frigidaire, Ltd., the Division's Canadian subsidiary, where he will be in charge of product engineering and process specification projects.

H. W. Guenther of the materials and process engineering section will succeed Woxman.

S. M. Schweller, Frigidaire's chief engineer, continues to head the overall engineering operation in Dayton. Also continuing as assistant chief engineer is F. H. McCormick, who is supervising range, washer, water heater, and other related appliance product engineering projects.



J. L. GIBSON
Asst. Chief
Engineer

E. F. SCHWELLER
Asst. Chief
Engineer

Gibson, Schweller Head Frigidaire Appointments

DAYTON—Expansion of the engineering department of Frigidaire division of General Motors and six new appointments have been announced by Mason M. Roberts, the division's general manager and GM vice president.

E. F. Schweller, manager of Frigidaire's household engineering department, and J. L. Gibson, manager of the commercial refrigeration and air conditioning engineering department, have been named assistant chief engineers.

Schweller, who has been with the organization since 1926, has been given the assignment of organizing and heading a new research and future products department.

Gibson, who also joined Frigidaire in 1926, will have general supervision over engineering work in connection with household refrigerators, commercial and air conditioning equipment, and materials and processes.

F. I. Rataiczak, another veteran

West Coast Conclaves--

(Concluded from Page 1, Column 4)

talks by industry authorities. In addition, servicemen and contractors will have an opportunity to enter a REWA-sponsored contest to determine the best exhibit in the show.

The RSES convention program, including conference talks, was published in last week's issue of the NEWS. The program for the RACCA convention will be found elsewhere in this issue.

The RSES convention will open Thursday afternoon in the Municipal Auditorium with the general business meeting. During this session, a talk on the new ASA B9.1 safety code will be presented. That evening, a buffet supper and fun festival will be held.

Five talks will be given Friday, two Saturday afternoon, and two Sunday morning. Each of these sessions will be started with a question-and-answer period.

Most of Saturday morning will be devoted to the concluding business session. The annual banquet, entertainment, and dance will be held in the evening at the Wilton hotel.

Official opening of the exhibit is scheduled for 1 p.m. Friday. It will close at 5 p.m. that day and then be open again from 7 to 10 p.m. Exhibit hours on Saturday are 10 a.m. to 5 p.m., and on Sunday they are noon to 4 p.m.

Levy's Opens Appliance Store

SAVANNAH, Ga. — Levy's has opened a new electrical appliance store at 223 E. Broughton St., which handles Kelvinator and Ambassador refrigerators and other appliances.

Johnston, Va. Smelting Vice President, Dies

WEST NORFOLK, Va. — Charles Wiswell Johnston, 69, vice president and director of the Virginia Smelting Co., died on Oct. 24. He suffered a heart attack while attending a meeting of the A.A.A. at the Waldorf-Astoria, New York. Death occurred at St. Luke's hospital at 6:45 p.m.

Johnston joined the Virginia Smelting Co. in 1915, as metallurgist in charge of its copper production activities. He became manager of chemical production in 1919 and was elevated to the vice presidency and a director in 1944.

With the advent of mechanical refrigeration, Johnston made important contributions to the production, application, and distribution of the refrigerant sulphur dioxide.

He was one of the founders of the Refrigeration Equipment Manufacturers Association and for many years was prominent in industry activities. He organized and was vice president of Portsmouth Frozen Foods.

Johnston is survived by his daughter and two sisters. Funeral services were held at St. John's Episcopal Church, Portsmouth, Va., Oct. 26. The body was taken to Boston for burial services Oct. 28 where it will rest in Forest Hills Cemetery.

New Market Has Conditioning

COLUMBIA, S. C. — Air conditioned, the new Lower Main Street Supermarket has just opened in the 2700 block of Millwood Ave.

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